TOWN OF ARLINGTON, MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS 51 GROVE STREET, ARLINGTON, MA. 02476



LOCUS MAP
SCALE: 1"=2000'

PHASE #10 SANITARY SEWER REHABILITATIONS

BID INVITATION NO. 18-32

MWRA III LOCAL FINANCIAL ASSISTANCE PROGRAM PROJECT #WRA-P9-01-3-984

MICHAEL W. RADEMACHER, P.E. DIRECTOR OF PUBLIC WORKS

JUNE 2018



Weston & Sampson

Weston & Sampson Engineers, Inc. Five Centennial Drive, Peabody, MA 01960

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File No. 232-102

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		DDADAGES
DESCRIPTION	EXISTING	PROPOSED
SANITARY SEWER	s	—8"S PVC —
WATER MAIN	W	6"W DI
STORM DRAIN	——— D	— 18"D RCP
GAS	G	——4*G——
ELECTRIC	E	——E——
TELEPHONE	Т —— Т	<u></u> T
HOUSE CONNECTION		6" HOUSE CONN (TYP
SANITARY SEWER MANHOLE	\$	● SMH
STORM DRAIN MANHOLE	0	● SDMH
ELECTRICAL MANHOLE	0	 ■ EMH
TELEPHONE MANHOLE	0	● TMH
CLEANOUT	0	• CO
CATCH BASIN		■ CB
HYDRANT	X	-
GATE VALVE	WV	H
		121
CHECK VALVE	1.71	
CURB STOP		7
BUTTERFLY VALVE		-7
CAP OR PLUG	GV	
GAS GATE VALVE	\bowtie	
UTILITY POLE	<i>₽</i>	•
GUY POLE	-0	
LIGHT POST	\$	
EDGE OF PAVEMENT		
CURB		5
SIDEWALK		5
STONE WALL	0000000	~~~~~
RETAINING WALL	RET WALL	RET WALL
FENCE	—-x—-x—	xx
INDIVIDUAL DECIDUOUS TREE	Û	₩
INDIVIDUAL EVERGREEN TREE	*	*
TREE LINE	~~~~	~~~~
SURVEY MARKER	S 0 S	
PROPERTY LINE	-\$ - P- -\$	-
EASEMENT LINE		
LIMIT OF WORK	0 0	
SPOT ELEVATIONS	x 141.5	x141.5
HOUSE NUMBER	#35	
FLOOR ELEVATION	ı FL=56.7 ı	
SILL ELEVATION	S=56.7	
WETLAND		
		1 2
WETLAND FLAGS	Δ	· · · -
GUARD POST	ΟB	• B
BOLLARD		-
SIGN	•	
BENCH MARK	TP	
TEST PIT	₽ 1	™ TP−1
GROUNDWATER MONITORING WELL	⊕ ws-1	⊕ WS−1
HAY BALES		
ROCK OUTCROP		

LEGEND	
EXISTING	PROPOSED
04306 •	04306 🛕
\odot	
04306 •	04306
S SHOWN IN THE RAIN. THE DESIGN OR CLARITY.	
	04306 • 04306 • 04306 • SHOWN IN THE

ABBREVIATIONS

AC	ASBESTOS CEMENT PIPE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BC	BITUMINOUS CONCRETE
BIT	BITUMINOUS
BLDG	BUILDING
BM_	BENCH MARK
CATV	CABLE TELEVISION
CB	CATCH BASIN CONCRETE CURB
CC	CAST IRON
Œ	CENTERLINE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CU FT	CUBIC FEET
CY	CUBIC YARD
D	STORM DRAIN, DEPTH FROM RIM TO INVERT
DI	DROP INLET, DUCTILE IRON
DIA DMH	DIAMETER DRAIN MANHOLE
DWG	DRAWNG
E	EAST, ELECTRIC
EA	EACH
ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
EXIST	EXISTING
FT	FEET, FOOT
G	NATURAL GAS
GC	GRANITE CURB
HC	HOUSE CONNECTION
HORIZ	HORIZONTAL
HP	HIGH PRESSURE
HYD	FIRE HYDRANT
18187	INVERT
INV ID	INVERT INSIDE DIAMETER
LB	POUND
LF	LINEAR FEET
LS	LUMP SUM
MAX	MAXIMUM
MB	MAIL BOX
МН	MANHOLE
MassDOT	MASSACHUSETTS DEPARTMENT OF TRANSPORTAION
MIN MISC	MINIMUM MISCELLANEOUS
MWRA	MASSACHUSETTS WATER RESOURCES AUTHORITY
N	NORTH
NE	NORTH EAST
NW	NORTH WEST
NO OR #	NUMBER
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
P	PROPERTY LINE
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT PENEODOED CONCRETE DIDE
RC RCP	REINFORCED CONCRETE PIPE REINFORCED CONCRETE PIPE
ROW	RIGHT-OF-WAY
S	SEWER, SOUTH
SE	SOUTH EAST
SF	SQUARE FEET
SPEC	SPECIFICATIONS
SQ FT	SQUARE FEET
SS	SEWER SERVICE, STAINLESS STEEL
STA	STATION
STL SW	STEEL SIDEWALK, SOUTH WEST
T T	HYDROSTATIC THRUST, TELEPHONE
TBM	TEMPORARY BENCH MARK
THK	THICK (NESS)
TYP	TYPICAL
UP	UTILITY POLE
VC	VITRIFIED CLAY
VERT	VERTICAL

VERTICAL FEET

WATER, WEST

MTH

WITHOUT

CONSTRUCTION NOTES:

- 1. THE CONTRACTOR SHALL CALL DIGSAFE AT 1-888-344-7233 AT LEAST 72 HOURS, SATURDAYS, SUNDAYS, AND HOLIDAYS EXCLUDED, PRIOR TO EXCAVATING AT ANY LOCATION. A COPY OF THE DIGSAFE PROJECT REFERENCE NUMBER(S) SHALL BE GIVEN TO THE OWNER PRIOR TO EXCAVATION. THE TOWN OF ARLINGTON IS NOT A MEMBER OF DIGSAFE. CONTRACTOR SHALL NOTIFY TOWN OF ARLINGTON WATER AND SEWER DIVISION AT 781-316-3310 FOR MARK-OUT OF TOWN SEWER, WATER AND DRAINAGE INFRASTRUCTURE. MWRA IS NOT A MEMBER OF DIGSAFE. CONTRACTOR SHALL NOTIFY KEVIN MCKENNA AT 617-305-5956 FOR MARK-OUT OF MWRA INFRASTRUCTURE.
- 2. LOCATIONS OF EXISTING PIPES, CONDUITS, UTILITIES, FOUNDATIONS AND OTHER UNDERGROUND OBJECTS ARE NOT WARRANTED TO BE CORRECT AND THE CONTRACTOR SHALL HAVE NO CLAIM ON THAT ACCOUNT SHOULD THEY BE OTHER THAN SHOWN.
- 3. ALL UTILITY CONFLICT NOTES ARE APPROXIMATE AND MAY NOT INCLUDE ALL POTENTIAL CONFLICTS. THESE NOTES DO NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO LOCATE ALL UTILITIES PRIOR TO BEGINNING THE WORK.
- 4. TEST PITS TO LOCATE EXISTING UTILITIES MAY BE ORDERED BY THE ENGINEER.
- 5. STONE WALLS, FENCES, MAIL BOXES, SIGNS, CURBS, LIGHT POLES, ETC. SHALL BE REMOVED AND REPLACED AS NECESSARY TO PERFORM THE WORK. UNLESS OTHERWISE INDICATED, ALL SUCH WORK SHALL BE INCIDENTAL TO CONSTRUCTION OF THE PROJECT.
- 6. ALL PAVEMENT DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED IN ACCORDANCE WITH THE SPECIFICATIONS AND AS SHOWN ON THE DRAWNGS.
- 7. ALL AREAS DISTURBED BY THE CONTRACTOR BEYOND PAYMENT LIMITS SHALL BE RESTORED AT NO ADDITIONAL COST TO THE OWNER.
- 8. THE CONTRACTOR SHALL NOT STORE ANY APPARATUS, MATERIALS, SUPPLIES, OR EQUIPMENT ON DRAINAGE STRUCTURES OR WITHIN 100 FEET OF WETLANDS, 50 FEET OF INTERSECTIONS OR 10 FEET OF DRIVEWAYS.
- 9. SEWER TRENCHES MAY BE EXCAVATED WIDER THAN THE 'LIMIT OF EXCAVATION AND PAYMENT FOR EARTH EXCAVATION' ABOVE THE 'LINE OF NARROW TRENCH LIMIT.' ANY SUCH ADDITIONAL EXCAVATION SHALL BE AT THE CONTRACTORS EXPENSE AND SHALL NOT BE MEASURED FOR PAYMENT.
- 10. BELOW THE 'LINE OF NARROW TRENCH LIMIT' THE TRENCH SHOULD NOT BE EXCAVATED BEYOND THE TRENCH WIDTH 'W'. IF MATERIAL IS LOOSENED OR REMOVED BEYOND THE ABOVE MENTIONED LIMITS, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE CRUSHED STONE FOR THE FULL WIDTH OF THE TRENCH AT NO ADDITIONAL COST TO THE OWNER.
- 11. OPENINGS FOR PIPE IN PRECAST MANHOLE BASES SHALL BE CAST IN THE REQUIRED LOCATIONS DURING MANHOLE MANUFACTURE. FIELD CUT OPENINGS WILL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER.
- 12. CONTRACTOR SHALL MAINTAIN EXISTING FLOWS IN THE SYSTEM, BYPASSING AS NECESSARY TO PREVENT SURCHARGING, AS APPROVED OR REQUIRED BY THE ENGINEER.
- 13. NO PAYMENT SHALL BE MADE FOR ADDITIONAL PIPE CLEANING. CONTRACTOR MUST REFER TO TELEVISION INSPECTION LOGS AND VIDEOS TO DETERMINE EXTENT OF CLEANING REQUIRED.
- 14. FORM BRICK INVERTS IN MANHOLES WITH BRICK ON EDGE TO A DEPTH OF 0.8 INSIDE DIAMETER OF PIPE AND FORM A 1 INCH SLOPED BENCH WITH BRICK FLAT. INVERT SHALL BE SLOPED UNIFORMLY BETWEEN INLET AND OUTLET PIPE AND SHALL BE FORMED AND FILLED AS REQUIRED TO DIRECT THE FLOW AS INDICATED AND TO PREVENT DEPOSITION OF SOLIDS.
- 15. IN PAVED AREAS THE TOP OF THE MANHOLE COVER SHALL BE SET FLUSH WITH THE PAVED SURFACE. IN OTHER AREAS THE TOP OF THE COVER SHALL BE SET AS SHOWN ON THE DRAWINGS, OR AS REQUIRED BY THE ENGINEER.
- 16. ALL STREET EXCAVATIONS SHALL BE COMPLETELY CLOSED AT THE END OF EACH WORKING DAY BY BACKFILLING OR COVERING WITH STEEL PLATES.
- 17. CONTRACTOR SHALL REPLACE ALL ACTIVE SEWER SERVICES ENCOUNTERED DURING EXCAVATION TO THE PROPERTY LINE UNLESS OTHERWISE INDICATED.
- 18. CONTRACTOR SHALL TELEVISE ALL SEWER SERVICES ENCOUNTERED DURING EXCAVATION FROM THE PROPERTY LINE TO THE BUILDING PRIOR TO REINSTATING LATERAL CONNECTIONS. RECORDING SHALL BE PROVIDED AT TIME OF THE INSPECTION.
- 19. ALL SIDEWALKS SHALL BE MAINTAINED FREE OF DEBRIS AND BLOCKAGES OR SHALL BE BARRICADED AND SUITABLE SAFETY BARRIERS INSTALLED.
- 20. CONTRACTOR SHALL PRODUCE AND DISTRIBUTE DOOR—TO—DOOR ABUTTER NOTIFICATION LETTERS AT LEAST TWO (2) WORKING DAYS PRIOR TO ALL WORK ITEMS. NOTIFICATION LANGUAGE SHALL BE APPROVED BY THE OWNER PRIOR TO DISTRIBUTION.

GENERAL NOTES:

- 1. PLANS ILLUSTRATE APPROXIMATE LOCATIONS OF MANHOLES AND SEWERS. REFER TO THE TABLES ON EACH SHEET FOR THE APPROXIMATE LINEAR FEET OF SEWER BETWEEN MANHOLES AND THE APPROXIMATE STATION LOCATIONS OF REHABILITATIONS. SEE TELEVISION INSPECTION LOGS IN THE SPECIFICATIONS FOR MORE INFORMATION. ALL LOCATIONS SHOULD BE FIELD VERIFIED BY THE CONTRACTOR.
- 2. SEE MANHOLE AND TELEVISION INVESTIGATION LOGS IN THE SPECIFICATIONS FOR MORE INFORMATION. MANHOLE DEPTHS AND DIAMETERS ARE APPROXIMATE.
- 3. EXCAVATION SHALL BE COMPLETED IN ACCORDANCE WITH ALL APPLICABLE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.
- 4. CONTRACTOR SHALL NOTE THE DATES ON WHICH THE MANHOLE AND PIPELINE TELEVISION INSPECTIONS WERE COMPLETED. THE DATES ARE SHOWN ON EACH LOG INCLUDED IN THE SPECIFICATIONS.
- 5. IN SITUATIONS WHERE WORK IS LOCATED OFF A PUBLIC STREET, THE 'STREET / LOCATION' FIELD OF THE TABLE INDICATES THE CLOSEST STREET.
- 6. CONTRACTOR SHALL PROVIDE ALL PROJECT VIDEO FILES ON AN EXTERNAL HARD DRIVE AT THE CONCLUSION OF THE PROJECT AS DESCRIBED IN SPECIFICATION SECTION 01331 DOCUMENTATION.
- 7. CONTRACTOR SHALL NOT ALLOW SAND, SILT OR OTHER SITE RUNOFF TO ENTER CATCH BASINS. ANY DEBRIS ENTERING SYSTEM DURING CONSTRUCTION SHALL BE REMOVED AT NO ADDITIONAL COST TO THE OWNER.
- 8. MANHOLES AND LINE SEGMENTS WITH WORK TO BE PERFORMED ARE BOLDED ON THE PLANS. WHERE THERE IS A DISCREPANCY BETWEEN THE BOLDED MANHOLE/LINE SEGMENT AND THE WORK TABLES, THE WORK TABLES SHALL CONTROL
- 9. WHERE THERE IS A DISCREPANCY BETWEEN THE SPECIFICATIONS AND THE WORK TABLES, THE WORK TABLES SHALL CONTROL.
- 10. THE SCOPE OF WORK OF THE BASE BID INCLUDES APPROXIMATELY: 60 LINEAR FEET OF PIPE BURSTING (TWO (2) PARALLEL 8-INCH CAST IRON SIPHON BARRELS APPROXIMATELY 30 LINEAR FEET); INSTALLATION OF APPROXIMATELY 134 LINEAR FEET OF HDPE SIPHON PIPE; REPLACEMENT OF 40 LINEAR FEET OF 6-INCH GRAVITY SEWER PIPE; REPLACEMENT OF TWO (2) SEWER SIPHON STRUCTURES; SET-UP OF A TEMPORARY SEWER BYPASS SYSTEM FOR THE SIPHON REPLACEMENT; AND OTHER RELATED TASKS IN THE TOWN OF ARLINGTON, MASSACHUSETTS.
- 11. THE SCOPE OF WORK OF THE ALTERNATE BID NO. 1 INCLUDES APPROXIMATELY: 26 LINEAR FEET OF OPEN CUT POINT REPAIRS OF SANITARY SEWERS AT TWO (2) LOCATIONS; REPLACEMENT OF 15 LINEAR FEET OF BUILDING CONNECTIONS AT ONE (1) LOCATION; INSTALLATION OF FOUR (4) PRECAST CONCRETE SEWER MANHOLES; 924 LINEAR FEET OF ROOT TREATMENT; 4,944 LINEAR FEET OF CURED—IN—PLACE PIPE; GROUTING 101 SERVICE CONNECTIONS IN CURED—IN—PLACE PIPE; CUTTING OF SIX (6) PROTRUDING SERVICE CONNECTIONS; EXTERIOR GROUTING AND INTERIOR SEALING OF 253 VERTICAL FEET OF SEWER MANHOLES; GROUT AND PATCH ONE (1) SEWER MANHOLE; INSTALL SEVEN (7) MANHOLE INFLOW DISHES; REPLACEMENT OF ONE (1) MANHOLE FRAME AND COVER; 1,000 LINEAR FEET OF CLEANING AND INSPECTION OF SEWERS; 4,944 LINEAR FEET OF POST—CONSTRUCTION FLOW ISOLATION; AND OTHER RELATED TASKS IN THE TOWN OF ARLINGTON, MASSACHUSETTS.
- 12. THE SCOPE OF WORK FOR ALTERNATE BID NO. 2 INCLUDES APPROXIMATELY: 1,075 LINEAR FEET OF 18-INCH CURED-IN-PLACE PIPE; GROUTING TWO (2) SERVICE CONNECTIONS IN CURED-IN-PLACE PIPE; INSPECTING, TESTING, AND SEALING OF SIX (6) SERVICE CONNECTIONS, EXTERIOR GROUTING AND INTERIOR SEALING OF 24 VERTICAL FEET OF SEWER MANHOLES; RAISING ONE (1) MANHOLE FRAME AND COVER TO GRADE; 1,330 LINEAR FEET OF POST-CONSTRUCTION FLOW ISOLATION; AND OTHER RELATED TASKS IN THE TOWN OF ARLINGTON, MASSACHUSETTS.
- 13. THE SCOPE OF WORK FOR ALTERNATE BID NO. 3 INCLUDES APPROXIMATELY: 262 LINEAR FEET OF ROOT TREATMENT; 1,341 LINEAR FEET OF CURED—IN—PLACE PIPE; GROUTING 29 SERVICE CONNECTIONS IN CURED—IN—PLACE PIPE; 262 LINEAR FEET OF STRUCTURAL CURED—IN—PLACE PIPE; GROUTING SEVEN (7) SERVICE CONNECTIONS IN STRUCTURAL CURED—IN—PLACE PIPE; EXTERIOR GROUTING AND INTERIOR SEALING OF 77 VERTICAL FEET OF SEWER MANHOLES; GROUT AND PATCH THREE (3) SEWER MANHOLES; RAISING THREE (3) MANHOLE FRAMES AND COVERS TO GRADE; 1,603 LINEAR FEET OF POST—CONSTRUCTION FLOW ISOLATION; AND OTHER RELATED TASKS IN THE TOWN OF ARLINGTON, MASSACHUSETTS.
- 14. THE SCOPE OF WORK FOR ALTERNATE BID NO. 4 INCLUDES APPROXIMATELY: 803 LINEAR FEET OF ROOT TREATMENT; 900 LINEAR FEET OF CURED—IN—PLACE PIPE; GROUTING 13 SERVICE CONNECTIONS IN CURED—IN—PLACE PIPE; CUTTING OF ONE (1) PROTRUDING SERVICE CONNECTIONS; EXTERIOR GROUTING AND INTERIOR SEALING OF 35 VERTICAL FEET OF SEWER MANHOLES; BUILDING BENCHES AND INVERTS IN THREE (3) SEWER MANHOLES; 900 LINEAR FEET OF POST—CONSTRUCTION FLOW ISOLATION; AND OTHER RELATED TASKS IN THE TOWN OF ARLINGTON, MASSACHUSETTS.
- 15. WORK HOURS OF 9:00 A.M. TO 3:00 P.M. MAY BE REQUIRED ON MYSTIC STREET, GRAY STREET, SPRING STREET, NORTH UNION STREET, HIGHLAND AVENUE, SUMMER STREET, AND MILL STREET.

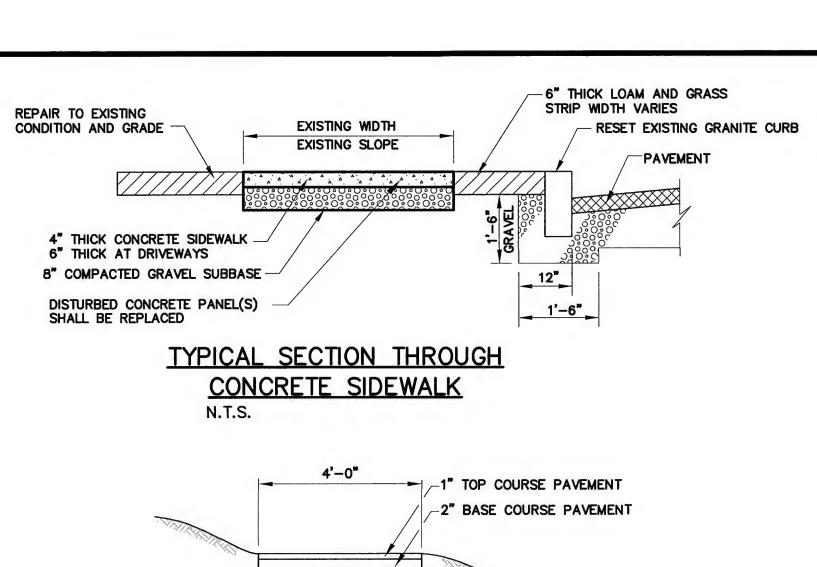
		weston(&		Weston & Samps	978.532.1900	www.westorian	
			No. Date Dr.By Ck.By App.By Description	A/P, P R O V E D	1. Min	REGISTERED PROFESSIONAL ENGINEER	
CONTRACTOR OF THE CONTRACTOR O							
						CHK.BY APP.BY JRH DME	

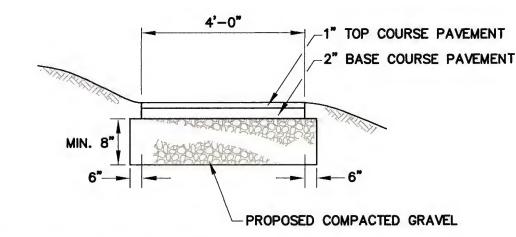
PHASE #10 SANITARY SEWER REHABILITATIONS

REVIATIONS, LEGENDS, AND NOTES

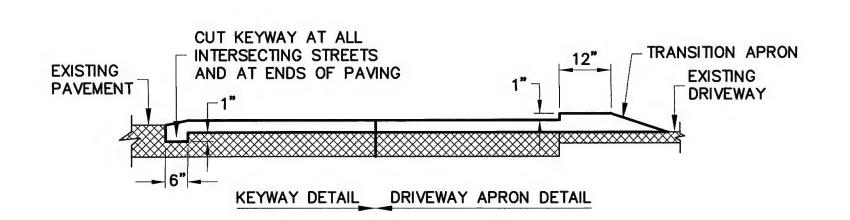
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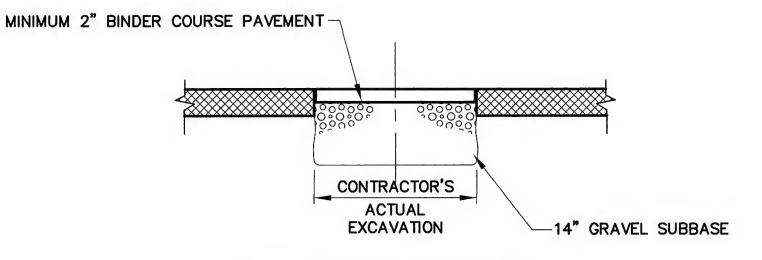
SHEET 2 OF 14





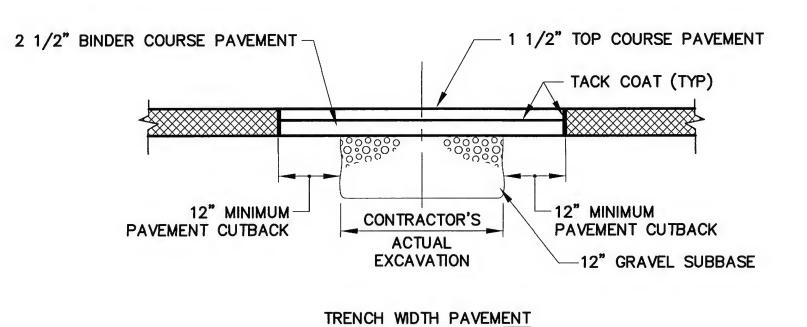
BITUMINOUS PAVEMENT WALKWAY DETAIL





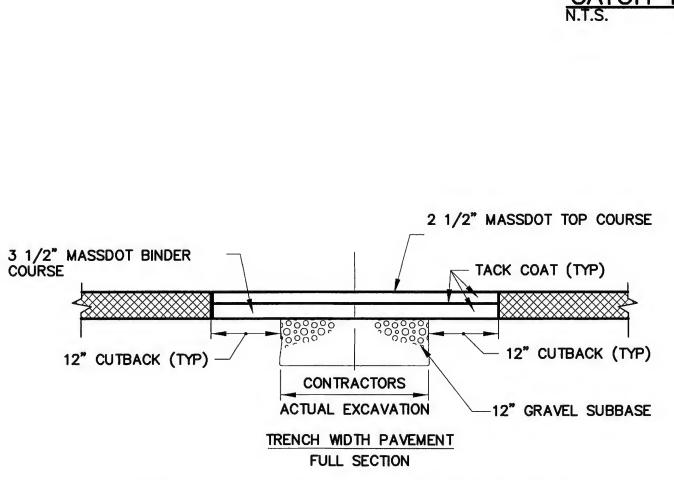
TEMPORARY TRENCH WIDTH PAVEMENT FULL SECTION

TYPE A - TEMPORARY PAVEMENT



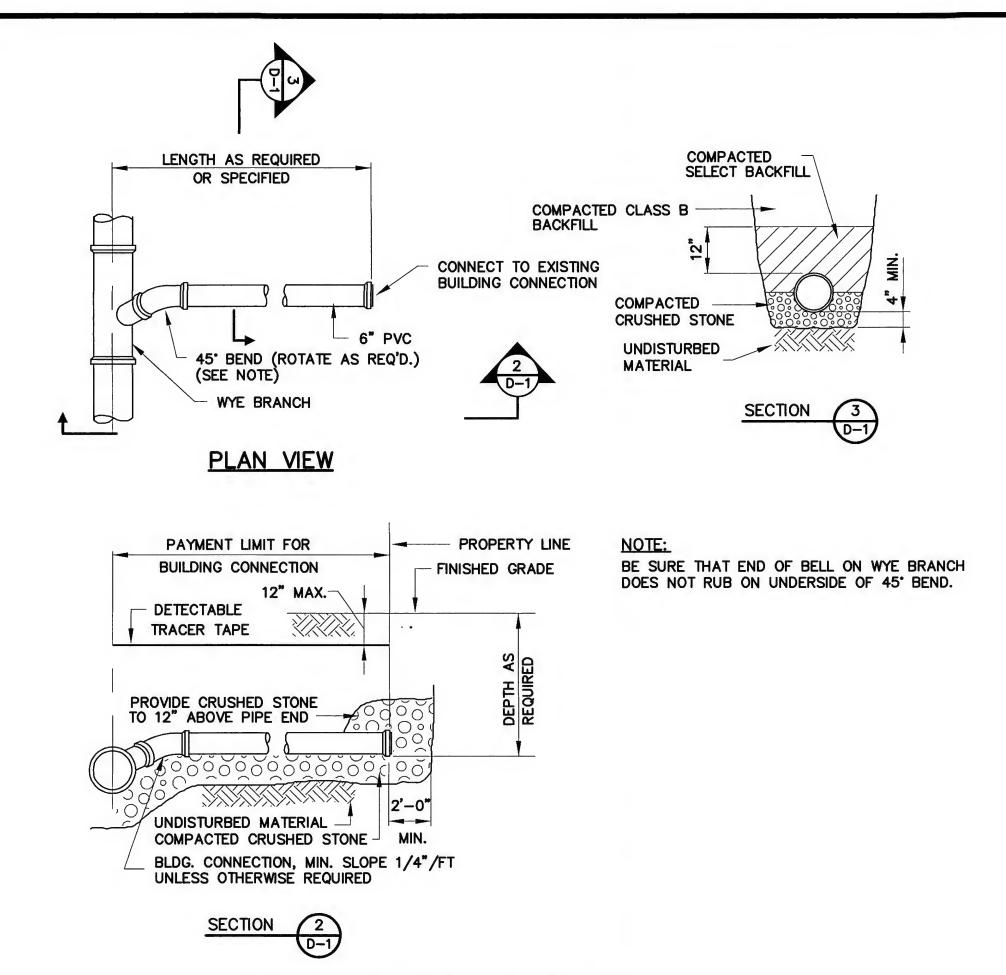
TYPE A - PERMANENT PAVEMENT

FULL SECTION

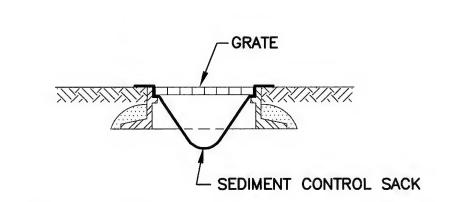


TYPE B - TEMPORARY PAVEMENT

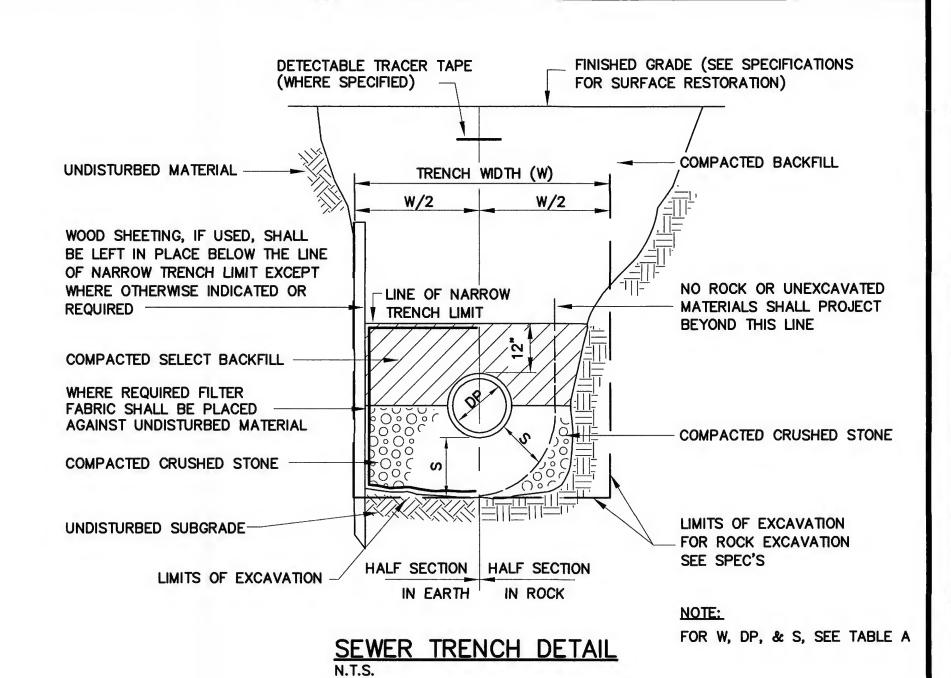
PAVEMENT REPLACEMENT DETAILS N.T.S.



TYPICAL BUILDING CONNECTION DETAIL

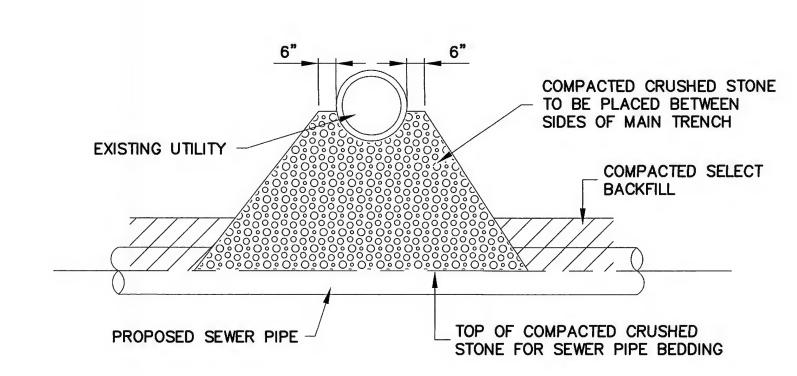


CATCH BASIN PROTECTION DETAIL

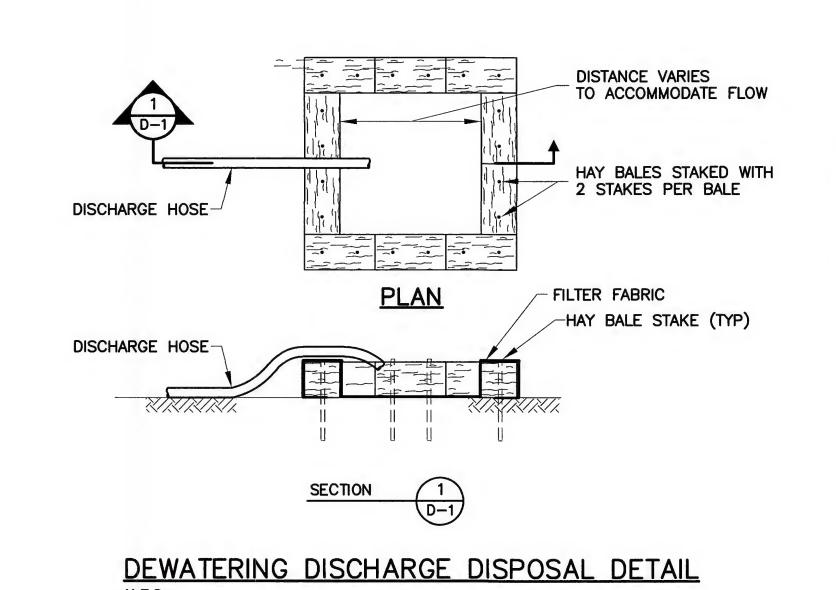


DEPTH TO INVERT	DIAMETER OF PIPE (DP)	MAXIMUM TRENCH WIDTH BELOW LINE OF NARROW TRENCH LIMIT (SHEETED OR UNSHEETED) (W)	MINIMUM CLEARANCE (S)
0-12'	TO 18"	5'	6"
0-12'	21"-24"	5'	7-1/2"
OVER 12'	TO 18"	7'	6"
OVER 12'	21"-24"	7'	7-1/2"

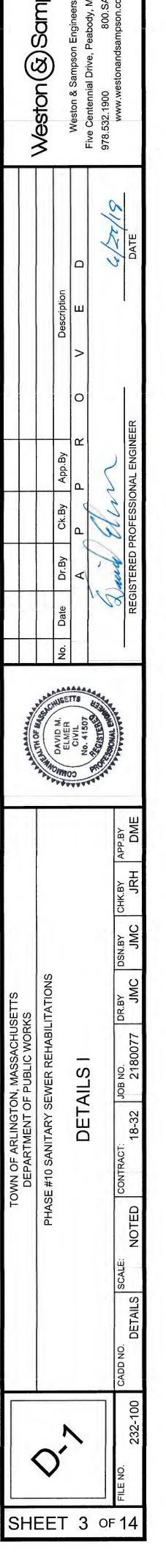
TABLE A

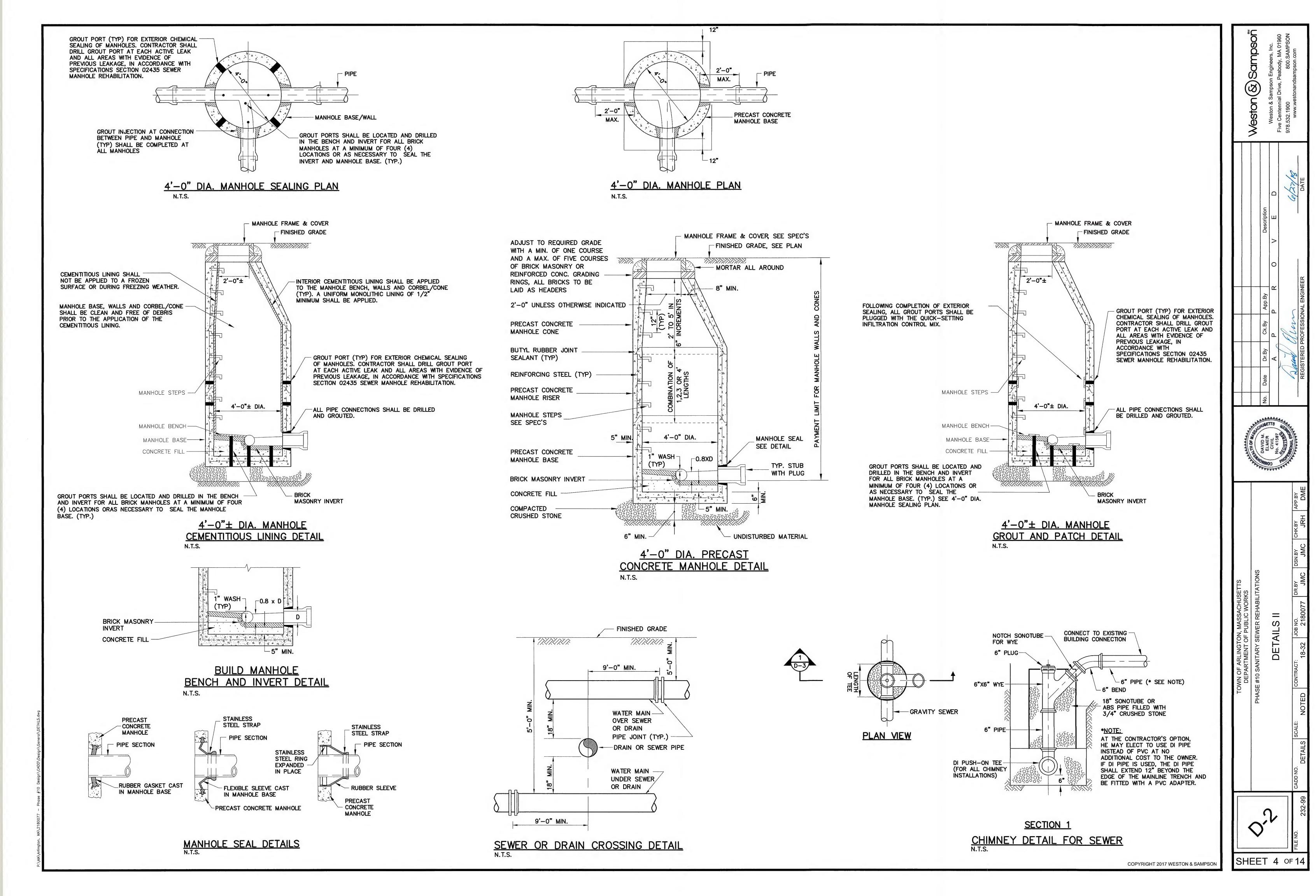


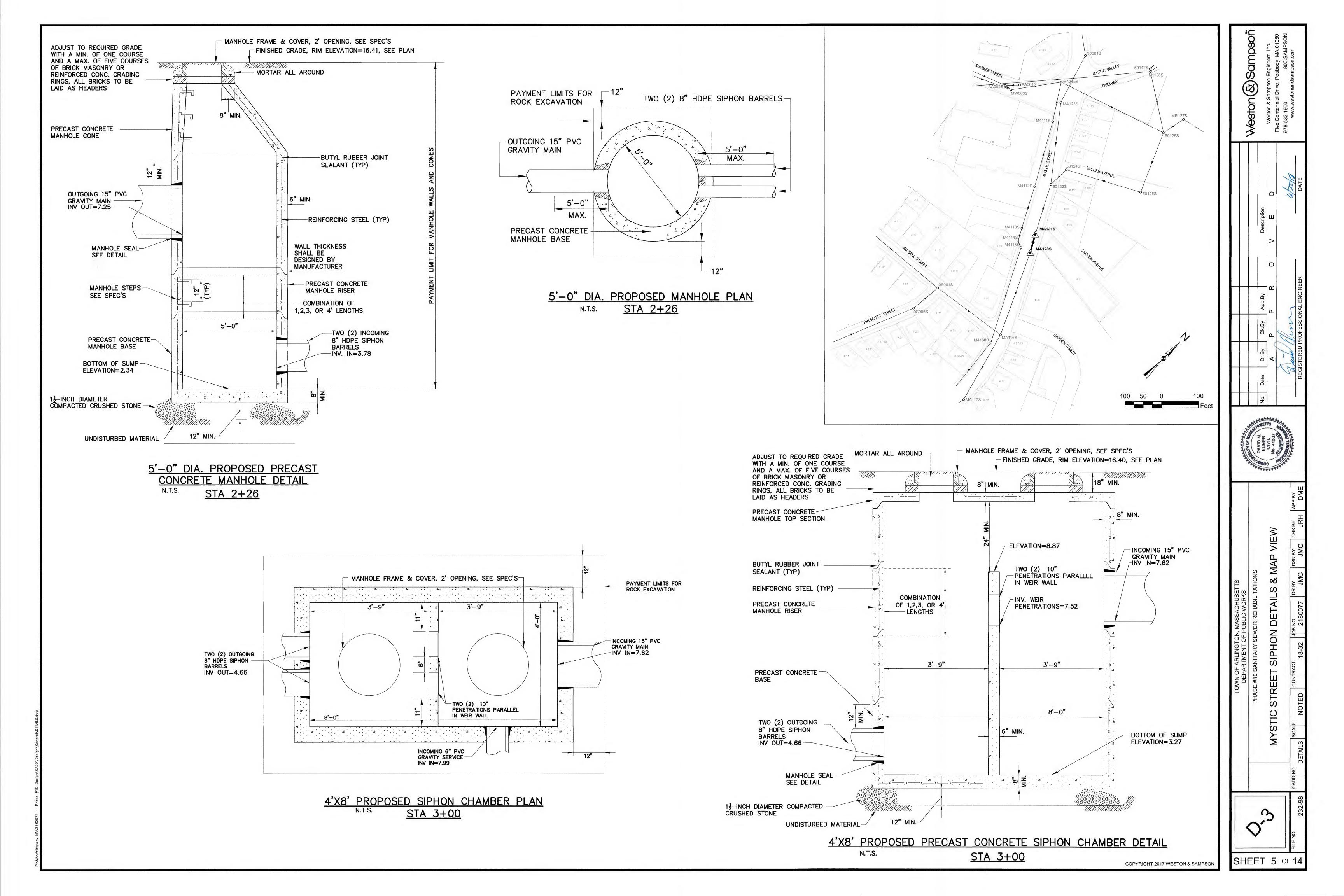
UTILITY CROSSING DETAIL

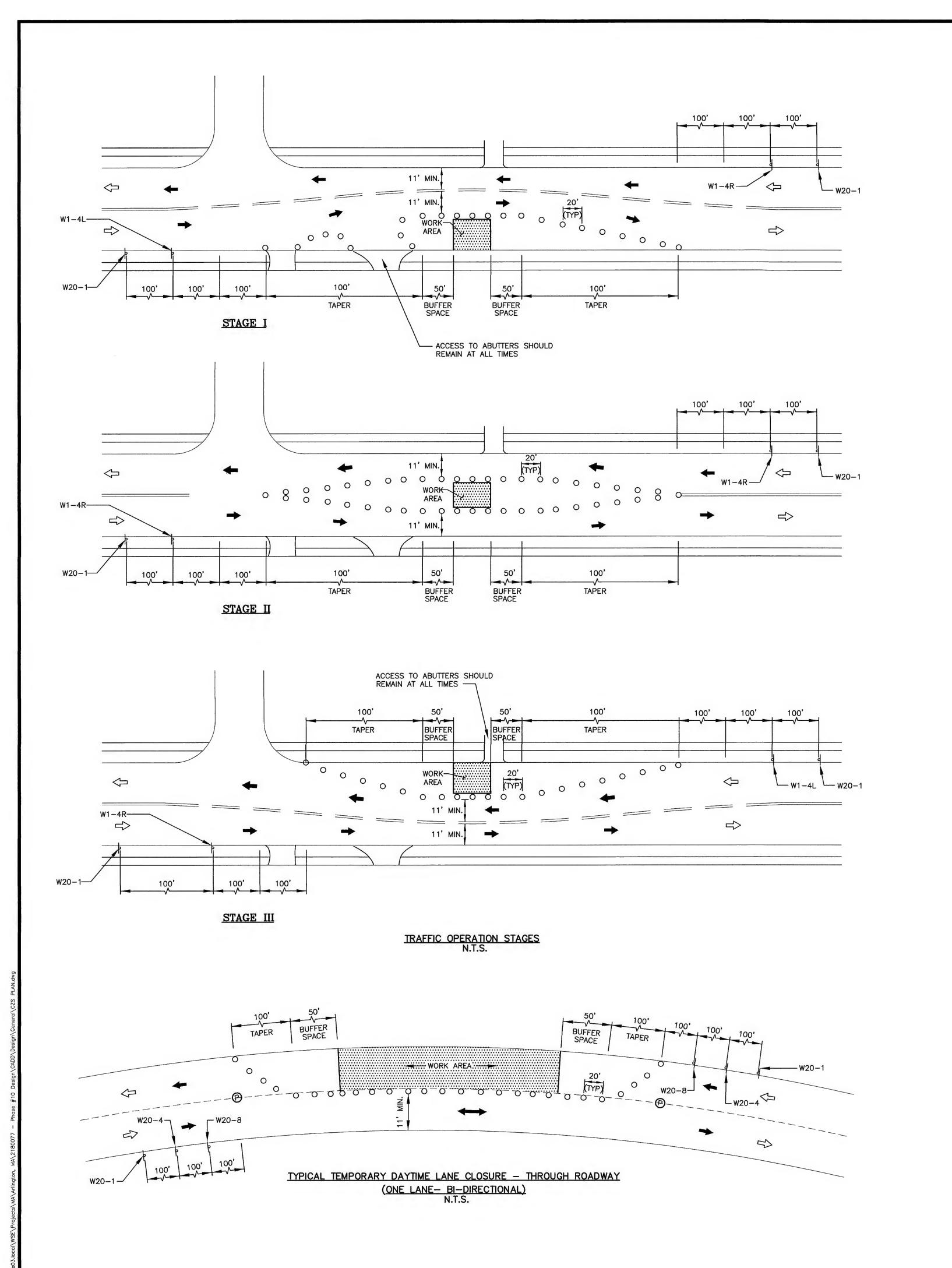


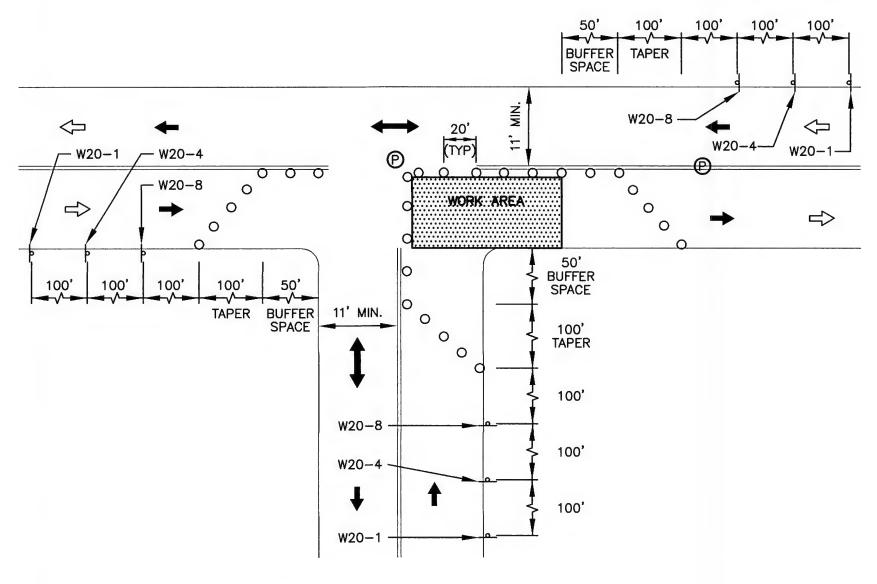
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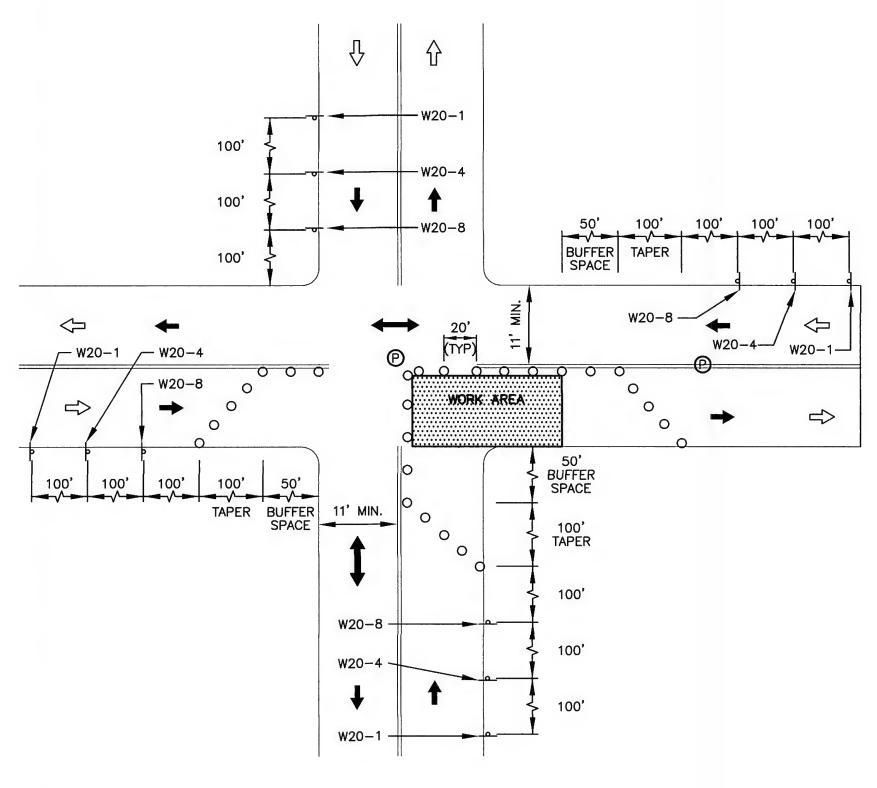








"T" INTERSECTION LANE CLOSURE



CLOSURE AT SIDE OF INTERSECTION N.T.S.

TEMPORARY	TRAFFIC	SIGN	SUMMARY

MUTCD	SIZE O	F SIGN	SIGN
CODE	WIDTH HEIGHT		31014
W1-4L	30"	30"	(\$)
W1-4R	30"	30"	(2)
W20-1	36*	36*	ROAD WORK AHEAD
W20-4	36*	36*	ONE LANE ROAD AHEAD
W20-8	36*	36"	POLICE OFFICER AHEAD

NOTE:

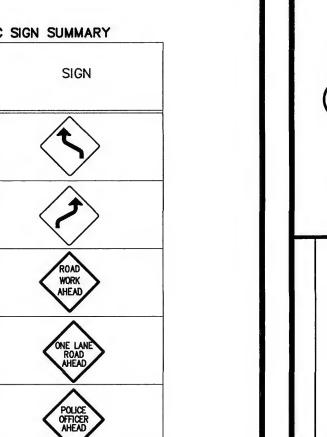
1. FOR THE LATEST SPECIFICATION ON TEXT DIMENSIONS AND COLOR, CONTRACTOR SHALL REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CURRENT EDITION).

LEGEND:

- O REFLECTORIZED DRUM
- TRAFFIC FLOW DURING CONSTRUCTION
- □ NORMAL TRAFFIC FLOW
- POLICE DETAIL OFFICERCONSTRUCTION SIGN
- WORK AREA

GENERAL NOTES:

- 1. PLACEMENT OF ALL CONSTRUCTION SIGNS, DRUMS, BARRICADES, TRAFFIC DEVICES AND THE SHAPE, SIZE & COLOR OF ALL TEMPORARY TRAFFIC SIGNS SHALL CONFORM WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- 2. ADVANCE WARNING SIGN PLACEMENT AND TAPER LENGTH TO BE ADJUSTED ACCORDING TO STREET CONDITIONS AND DRIVEWAY OPENINGS.
- 3. ALL DRUMS SHALL BE APPROXIMATELY PLACED AND MOVED AS NECESSARY TO MAINTAIN ADEQUATE ABUTTER ACCESS AT ALL TIMES.
- 4. THE CONTRACTOR SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT AND SIMILAR OPERATIONS.
- 5. NONESSENTIAL TRAFFIC CONTROL DEVICES SHALL BE COVERED OR REMOVED DURING NON-WORKING HOURS.
- 6. PEDESTRIANS SHALL BE PROVIDED WITH ACCESS AND SAFE PASSAGE THROUGH THE TEMPORARY TRAFFIC CONTROL ZONE AT ALL TIMES.
- 7. W20-8 SHALL BE TAKEN DOWN OR COVERED AFTER EACH WORKING DAY OR WHEN OTHERWISE NOT APPLICABLE, OR WHEN POLICE OFFICERS ARE NOT PRESENT TO DIRECT TRAFFIC.
- 8. ADVISORY SPEED PLATES (W13-1 SEE CURRENT EDITION OF MUTCD) SHALL BE USED IF APPLICABLE AND AS REQUIRED BY THE ENGINEER.
- 9. NO DIFFERENCE IN ROADWAY LANE ELEVATION WILL BE ALLOWED AT THE END OF THE WORK DAY.
- 10. SAMPLE TRAFFIC PLANS INCLUDED ON THIS PLAN SHEET ARE BASED ON AN URBAN (LOW SPEED) ROAD TYPE FROM THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- 11. DASHED LINES SHOW LANE DESIGATIONS TO BE USED DURING CONSTRUCTION.
- 12. THE CONTRACTOR SHALL SUBMIT ANY REVISIONS TO THE CONSTRUCTION ZONE SAFETY PLAN TO THE ENGINEER FOR APPROVAL.
- 13. THIS CONSTRUCTION ZONE SAFETY PLAN SHALL NOT RELIEVE THE CONTRACTOR OF HIS SOLE RESPONSIBILITY FOR CONSTRUCTION SITE SAFETY.



	0		
	œ		SINFER
App.By	۵		NAI FN
Ck.By	۵	M	REGISTERED PROFESSIONAL ENGINEER
Dr.By	CA A	and Bank	STEREDP
Date		13	RFG
No.			

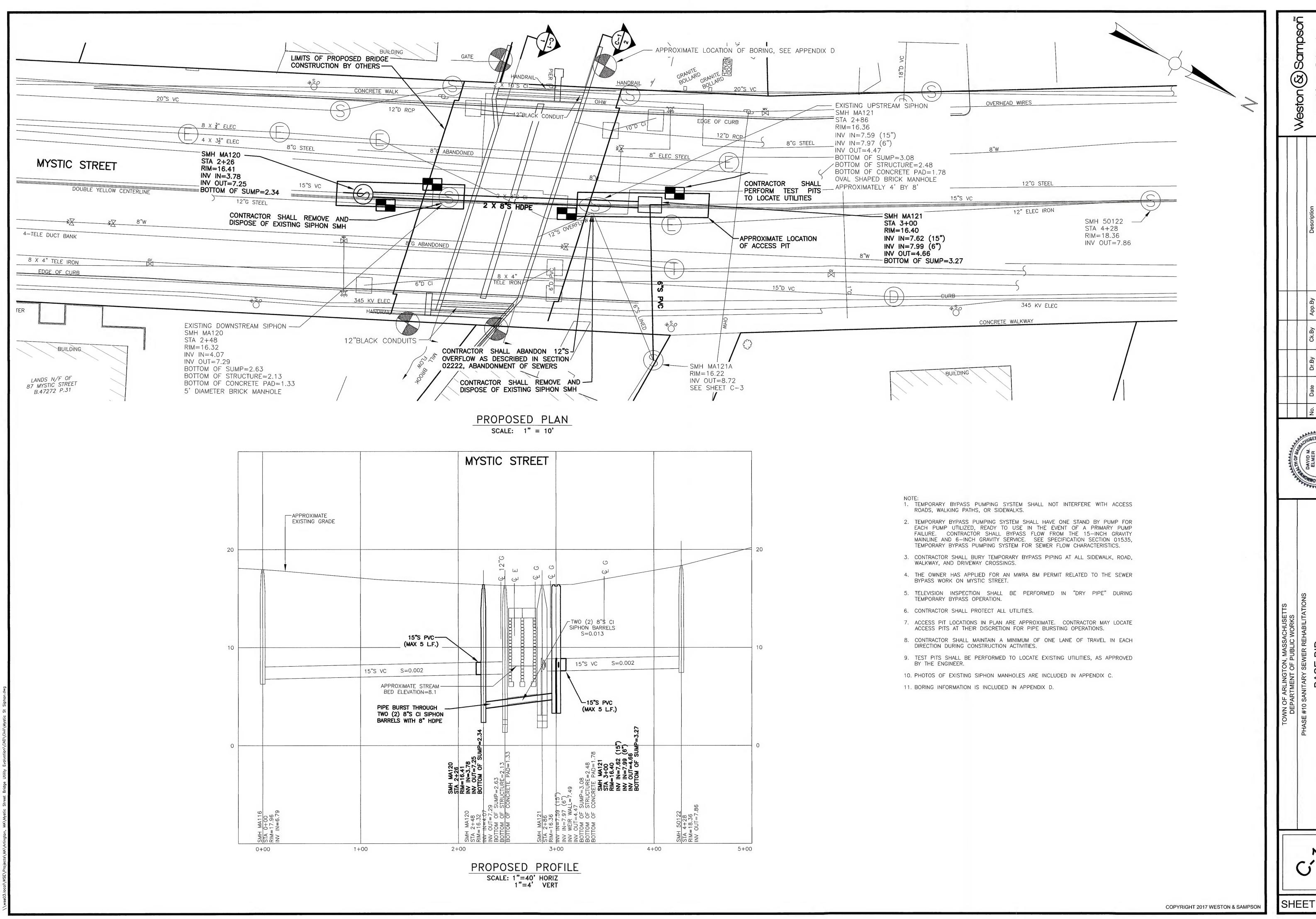


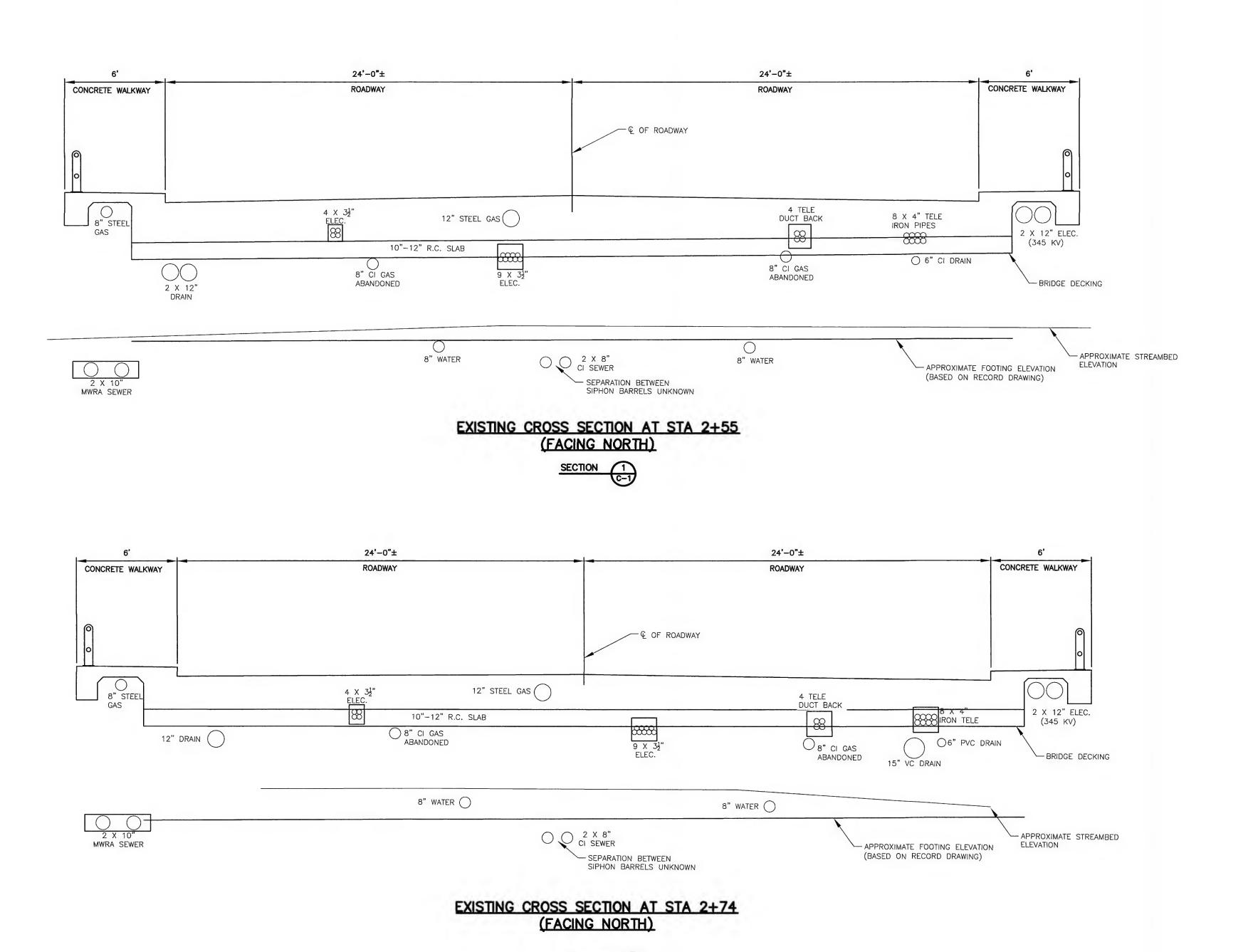
ION ZONE SAFETY PLAN

CONSTRUCTION ZO

FILE NO. 232-97

SHEET 6 OF 14

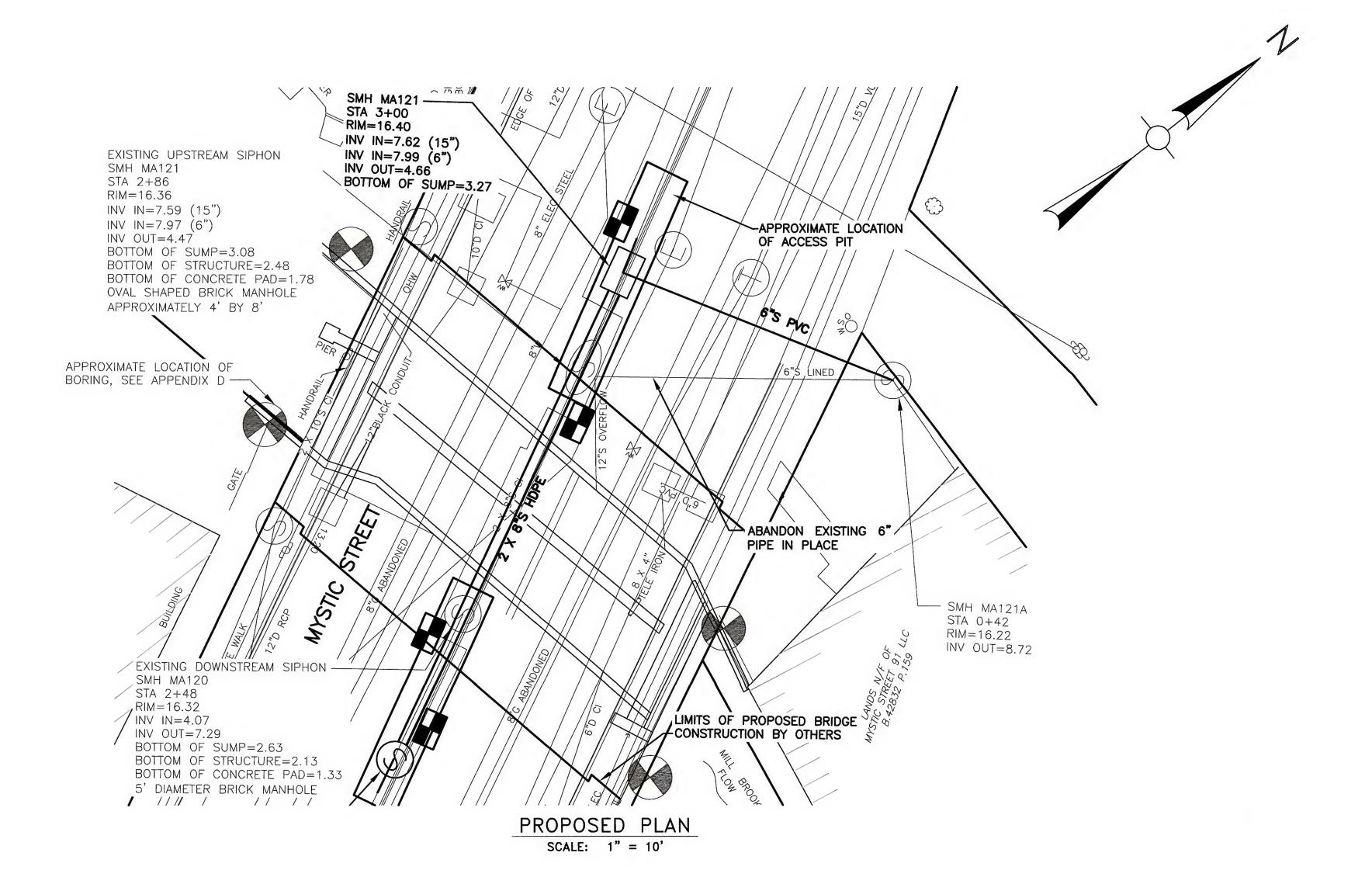




EXISTING CROSS SECTION VIEWS

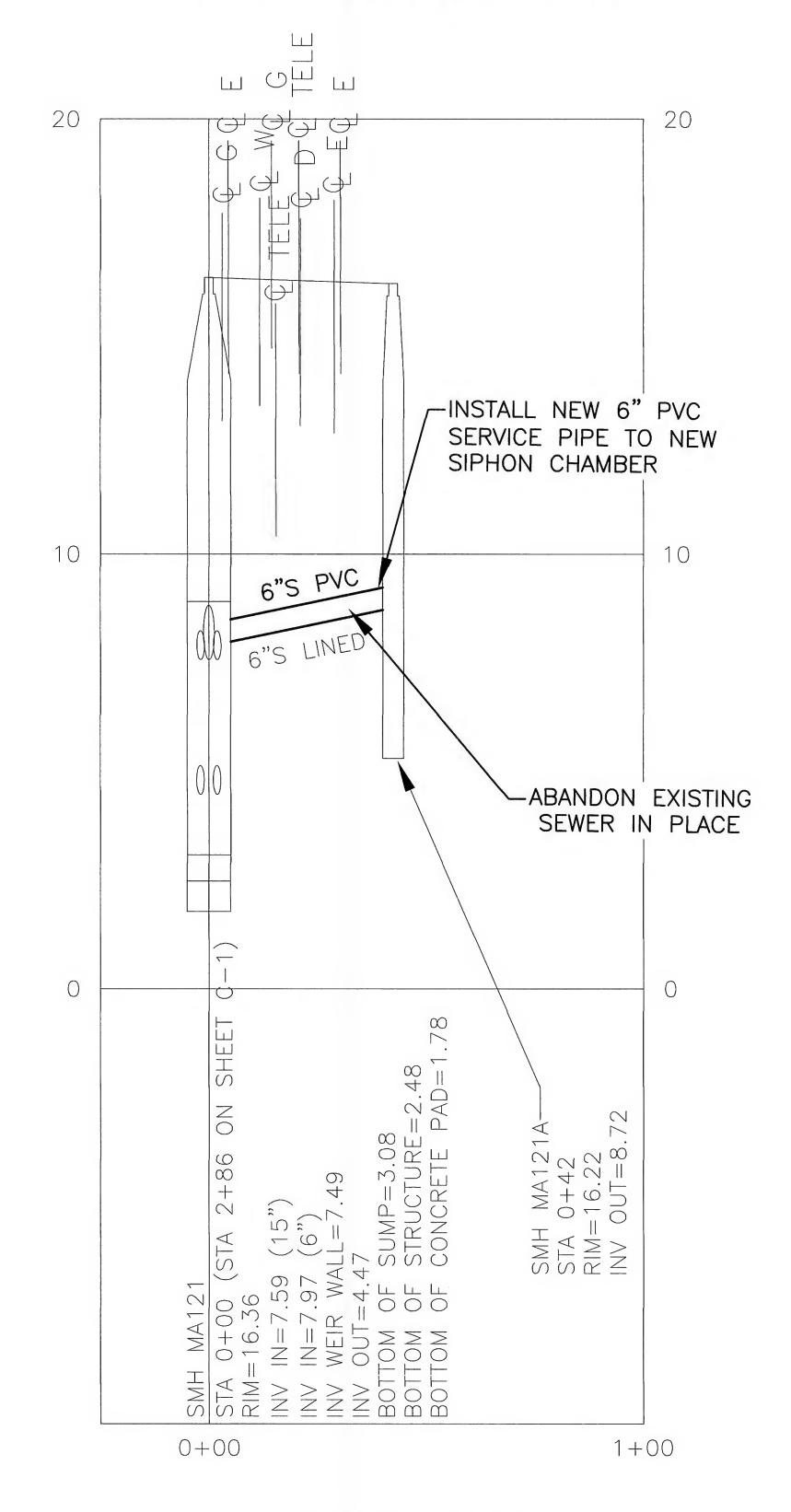
SCALE: 1/4" = 1'

SHEET 8 OF 14

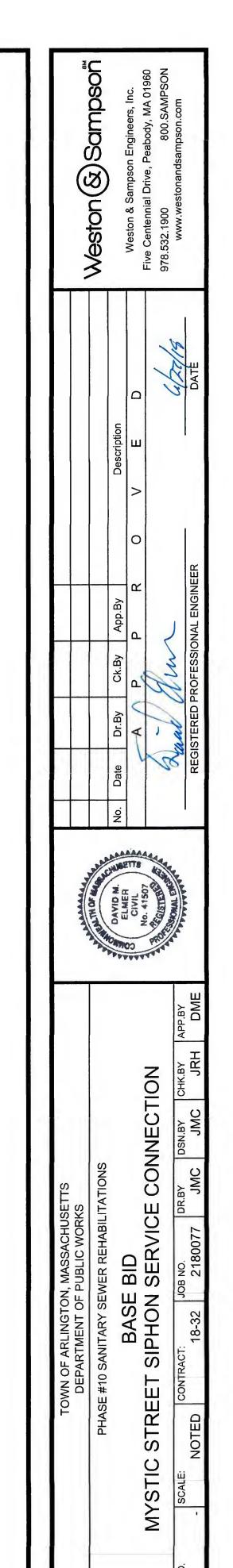


- 1. TEMPORARY BYPASS PUMPING SYSTEM SHALL NOT INTERFERE WITH ACCESS ROADS, WALKING PATHS, OR SIDEWALKS.
- 2. TEMPORARY BYPASS PUMPING SYSTEM SHALL HAVE ONE STAND BY PUMP FOR EACH PUMP UTILIZED, READY TO USE IN THE EVENT OF A PRIMARY PUMP FAILURE. CONTRACTOR SHALL BYPASS FLOW FROM THE 15-INCH GRAVITY MAINLINE AND 6-INCH GRAVITY SERVICE. SEE SPECIFICATION SECTION 01535, TEMPORARY BYPASS PUMPING SYSTEM FOR SEWER FLOW CHARACTERISTICS.
- 3. CONTRACTOR SHALL BURY TEMPORARY BYPASS PIPING AT ALL SIDEWALK, ROAD, WALKWAY, AND DRIVEWAY CROSSINGS.
- 4. THE OWNER HAS APPLIED FOR AN MWRA 8M PERMIT RELATED TO THE SEWER BYPASS WORK ON MYSTIC STREET.
- 5. TELEVISION INSPECTION SHALL BE PERFORMED IN "DRY PIPE" DURING TEMPORARY BYPASS OPERATION.
- 6. CONTRACTOR SHALL PROTECT ALL UTILITIES.
- 7. ACCESS PIT LOCATIONS IN PLAN ARE APPROXIMATE. CONTRACTOR MAY LOCATE ACCESS PITS AT THEIR DISCRETION FOR PIPE BURSTING OPERATIONS.
- 8. CONTRACTOR SHALL MAINTAIN A MINIMUM OF ONE LANE OF TRAVEL IN EACH DIRECTION DURING CONSTRUCTION ACTIVITIES.
- 9. TEST PITS SHALL BE PERFORMED TO LOCATE EXISTING UTILITIES, AS APPROVED
- 10. PHOTOS OF EXISTING SIPHON MANHOLES ARE INCLUDED IN APPENDIX C.
- 11. BORING INFORMATION IS INCLUDED IN APPENDIX D.

MYSTIC STREET SERVICE CONNECTION



PROPOSED PROFILE SCALE: 1"=20' HORIZ 1"=2' VERT



SHEET 9 OF 14

MANHOLE TO MANHOLE CURED-IN-PLACE PIPE

ALTERNATE BID NO. 1	1 ITEM 18a, 18b, 18c
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	ALTERNATE BID NO. 1 ITEM 18a, 18b, 18c								
STREET/LOCATION	SUBAREA	MANHOLE	TO SUBAREA	TO MANHOLE	PIPE DIA (IN)	MATERIAL	APPROXIMATE MH TO MH LENGTH (LF)	REINSTATE SERVICE	
FOUNTAIN ROAD	18	022	18	021	8	VC	327	0+38, 0+63, 0+63, 1+15, 1+40, 1+65, 2+00, 2+20, 2+55	
FOUNTAIN ROAD	18	023	18	022	8	VC	326	0+69, 0+75, 0+98, 1+31, 1+87, 1+97, 2+30, 2+54, 2+83, 3+05, 3+22	
FOUNTAIN ROAD	18	025	18	023	8	VC	184	0+04, 0+31, 0+50, 0+56, 0+77, 0+98, 1+63, 1+65	
FOUNTAIN ROAD	18	025	18	026	8	VC	228	0+03, 0+58, 0+60, 1+04, 1+18, 1+53, 1+73, 1+88	
QUINCY STREET	19	005	19	004	8	VC	123	0+15, 0+32, 0+33	
QUINCY STREET	19	006	19	005	8	VC	99	0+68	
QUINCY STREET	19	007	19	006	8	VC	133	0+27, 0+40	
QUINCY STREET	19	008	19	007	8	VC	114	0+60	
BENJAMIN ROAD	19	008	19	016	6	VC	166	NONE	
QUINCY STREET	19	009	19	008	8	VC	149	0+51, 0+54, 0+83, 0+96	
QUINCY STREET	19	010	19	009	8	VC	168	0+24, 0+77, 1+06, 1+06, 1+38, 1+47	
LEHIGH STREET	19	010	19	018	8	VC	65	NONE	
LEHIGH STREET	19	018	19	017	8	VC	145	0+46, 0+69, 1+42, 1+43	
BENJAMIN ROAD	19	019	19	008	8	VC	158	0+14, 0+16	
BENJAMIN ROAD	19	019	19	020	8	VC	37	0+34	
TOMAHAWK ROAD	47	036	47	033	8	AC	233	0+66	
TOMAHAWK ROAD	47	037	47	036	8	AC	215	0+09, 0+93, 0+99, 1+03, 1+95, 2+09	

CEMENTITIOUS LINING OF SEWER MANHOLES

ALTERNATE BID NO. 1 ITEM 20a

STREET/LOCATION	SUBAREA	MANHOLE	MATERIAL	APPROXIMATE MANHOLE DEPTH (VF)
FOUNTAIN ROAD	18	022	BRICK	6
FOUNTAIN ROAD	18	023	BRICK	6
FOUNTAIN ROAD	18	025	BRICK	6
QUINCY STREET	19	004	BRICK	8
QUINCY STREET	19	005	BRICK	7
QUINCY STREET	19	006	BRICK	7
QUINCY STREET	19	007	BRICK	7
QUINCY STREET	19	800	BRICK	7
QUINCY STREET	19	009	BRICK	6
QUINCY STREET	19	010	BRICK	8
LEHIGH STREET	19	018	BRICK	5
BENJAMIN ROAD	19	019	BRICK	7
LAWRENCE LANE	47	033	BRICK	9
TOMAHAWK ROAD	47	036	BRICK	6
TOMAHAWK ROAD	47	037	BRICK	8

1. THE INVERT OF MANHOLE 19008 SHALL BE CHIPPED OUT PRIOR TO INSTALLATION OF CURED-IN-PLACE PIPE.

INSTALL PRECAST SEWER MANHOLE ALTERNATE BID NO. 1 ITEM 12a, 12b

ALIERIVATE BID NO. 1 TEN 12a, 12b								
STREET/LOCATION	SUBAREA	MANHOLE	EXISTING STRUCTURE	APPROXIMATE FOOTAGE FROM DOWNSTREAM	APPROXIMATE EXISTING DEPTH TO			
			SIRUCIURE	SEWER MANHOLE (LF)	INVERT (VF)			
FOUNTAIN ROAD	18	026	LAMPHOLE	228	5.5			
BENJAMIN ROAD	19	016	LAMPHOLE	155	5.5			
LEHIGH STREET	19	017	LAMPHOLE	145	7			
BENJAMIN ROAD	19	020	LAMPHOLE	193	6			

NOTE:

- 1. APPROXIMATE EXISTING DEPTH (VF) AND LINEAR FOOTAGE (LF) BASED ON TOWN RECORD DRAWINGS.
- 2. PRECAST MANHOLE 19017 SHALL BE EXTENDED 10 LINEAR FEET FROM THE END OF THE SEWER PIPE TO INSTALL THE STRUCTURE PAST END OF ADJACENT WATER MAIN.

CUT PROTRUDING SEWER SERVICE CONNECTION

ALTERNATE BID NO. 1 ITEM 19a

STREET/LOCATION	CHRADEA	MANHOLE	ТО	то	PIPE DIA	MATERIAL	APPROXIMATE MH TO	APPROXIMATE	
3TREET/LOCATION	JUDANLA	WANTIOLE	SUBAREA	MANHOLE	(IN)	IVIATENIAL	MH LENGTH (LF)	STATION	
QUINCY STREET	19	006	19	005	8	VC	99	0+68	
BENJAMIN ROAD	19	019	19	020	8	VC.	37	0+34	

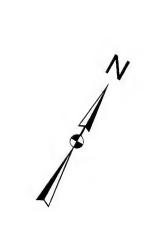
INSTALL PRECAST SEWER MANHOLE

GROUT AND PATCH SEWER MANHOLES

ALTERNATE BID NO. 1 ITEM 20b									
STREET/LOCATION	SUBAREA	MANHOLE		MATERIAL	APPROXIMATE MANHOLE DEPTH (VF)				
GRAY STREET	18	021		LINED	9				

INSTALL MANHOLE INFLOW DISH

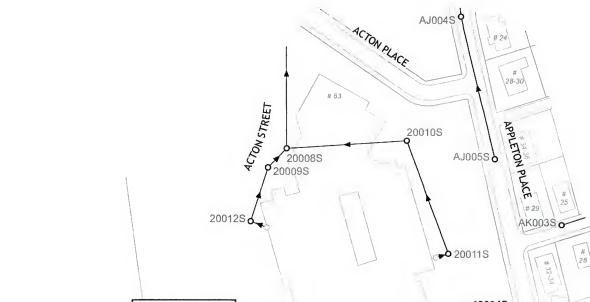
STREET/LOCATION	SUBAREA	MANHOLE
QUINCY STREET	19	004
QUINCY STREET	19	005
QUINCY STREET	19	010
LEHIGH STREET	19	018

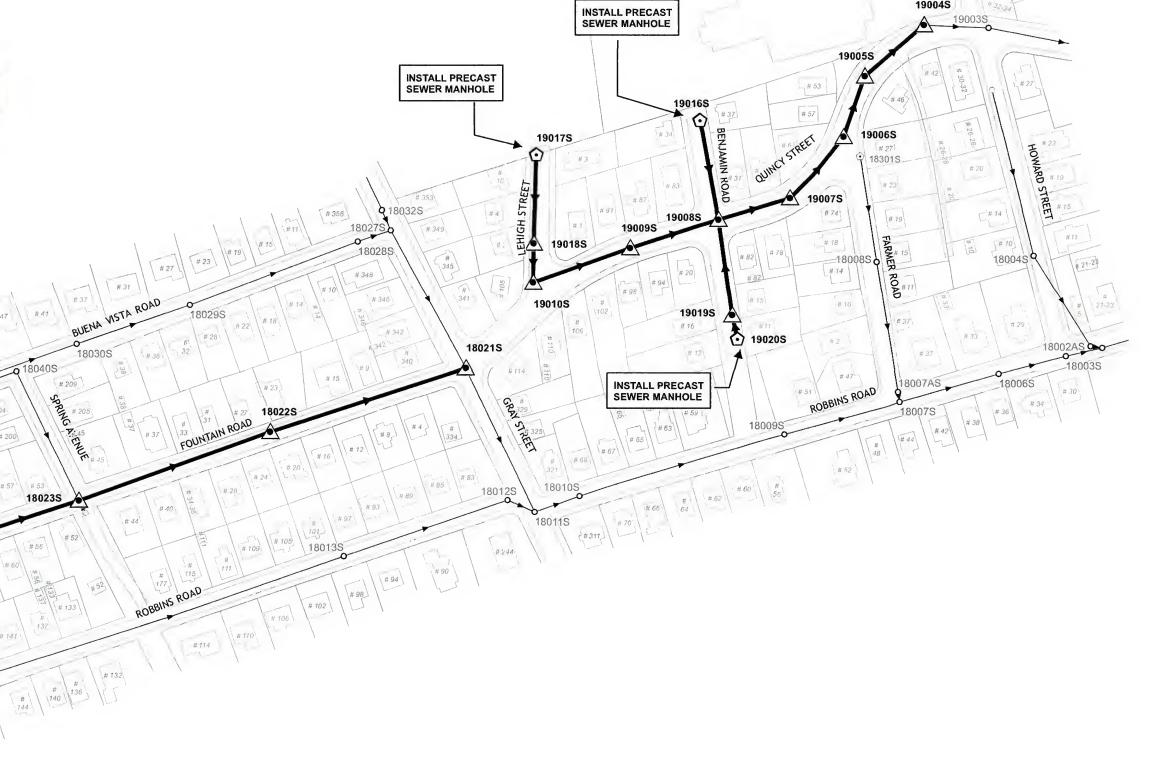


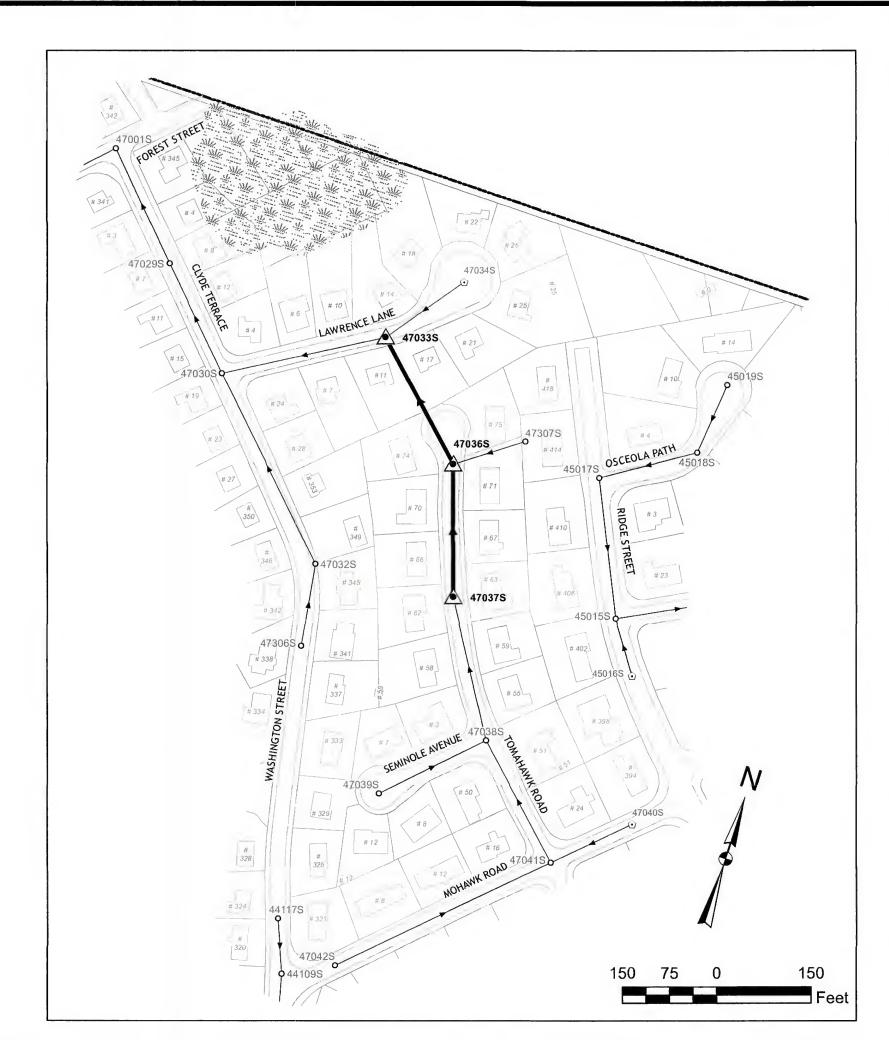


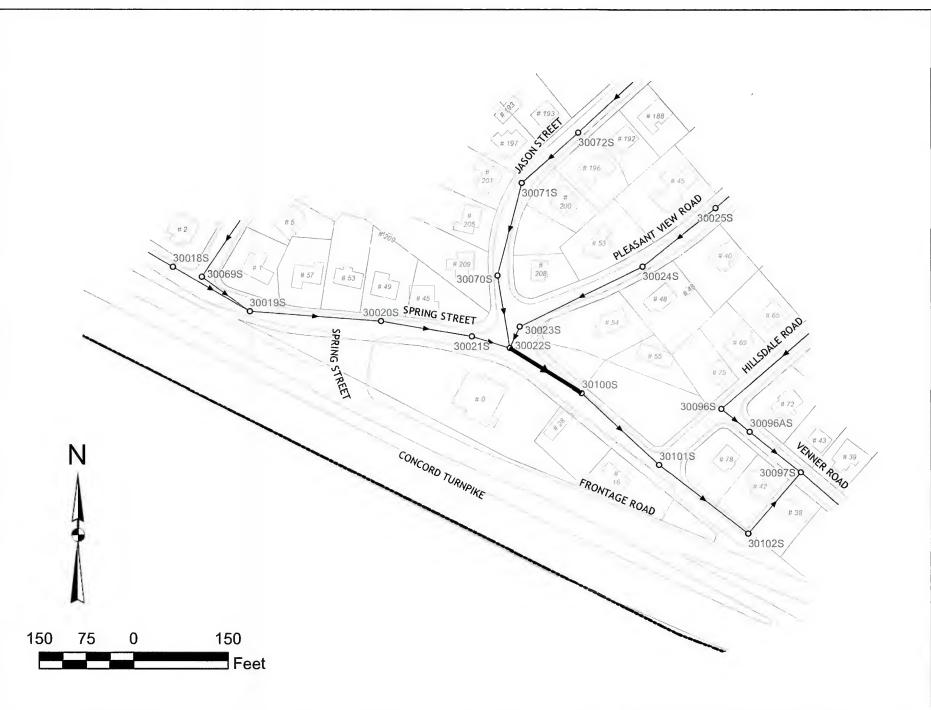
CLEANING AND INSPECTION OF SEWERS ALTERNATE BID NO. 1 ITEM 21a

STREET/LOCATION	SUBAREA	MANHOLE	SUBAR	TO EA MANHOLE	PIPE DIA	MATERIAL	APPROXIMATE MH TO MH LENGTH (LF)
SPRING STREET	30	022	30	100	12	VC	158









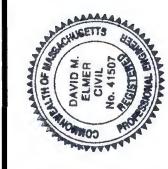
MAINLINE CHEMICAL ROOT TREATMENT

	ALTERNATE BID NO. 1 ITEM 17a										
STREET/LOCATION	CLIDADEA	MANHOLE	TO TO PIPE		PIPE DIA	MATERIAL	APPROXIMATE MH				
STREET/LOCATION	SUBAREA			SUBAREA	MANHOLE		(IN)	MATERIAL	TO MH LENGTH (LF)		
TOMAHAWK ROAD	47	037		47	036		8	AC	215		

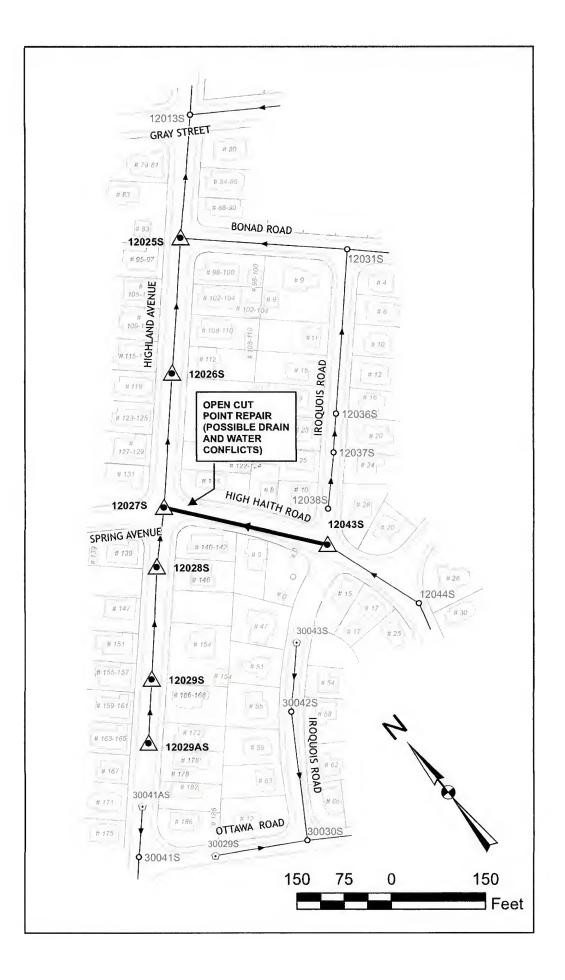
OPEN CUT POINT REPAIR OF GRAVITY SEWER

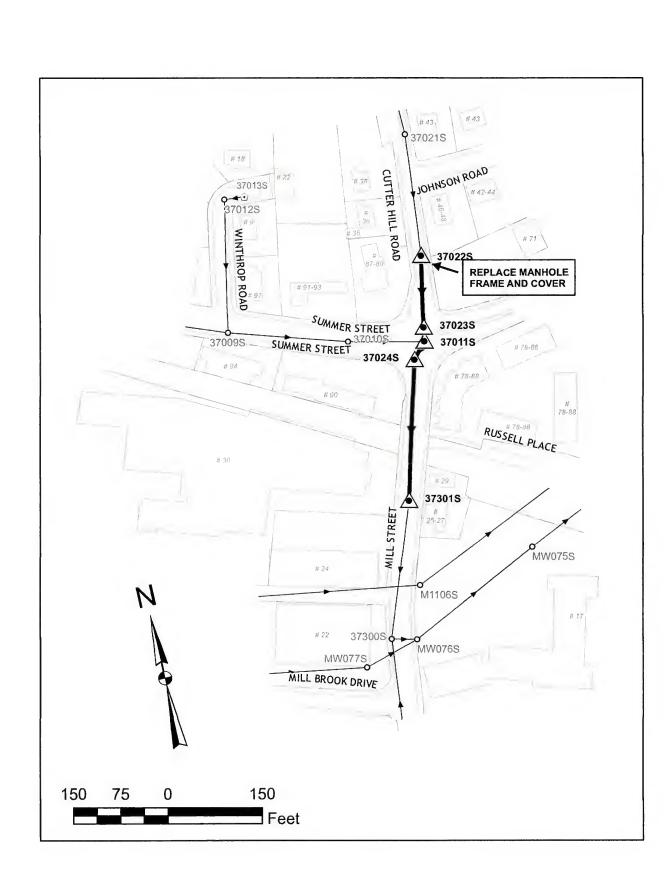
•	COI	· One	INCIA	VIII OI	GIVAV	III JL
	AL1	TERNA	TE BID	NO. 1	ITEM	10a

STREET/LOCATION	SUBAREA	MANHOLE	TO SUBAREA	TO MANHOLE	PIPE DIA (IN)	IMATERIAL	APPROXIMATE MH TO MH LENGTH (LF)		TO APPROXIMATE STATION	REINSTATE SERVICE
QUINCY STREET	19	005	19	004	8	VC	123	1+04	1+13	NONE



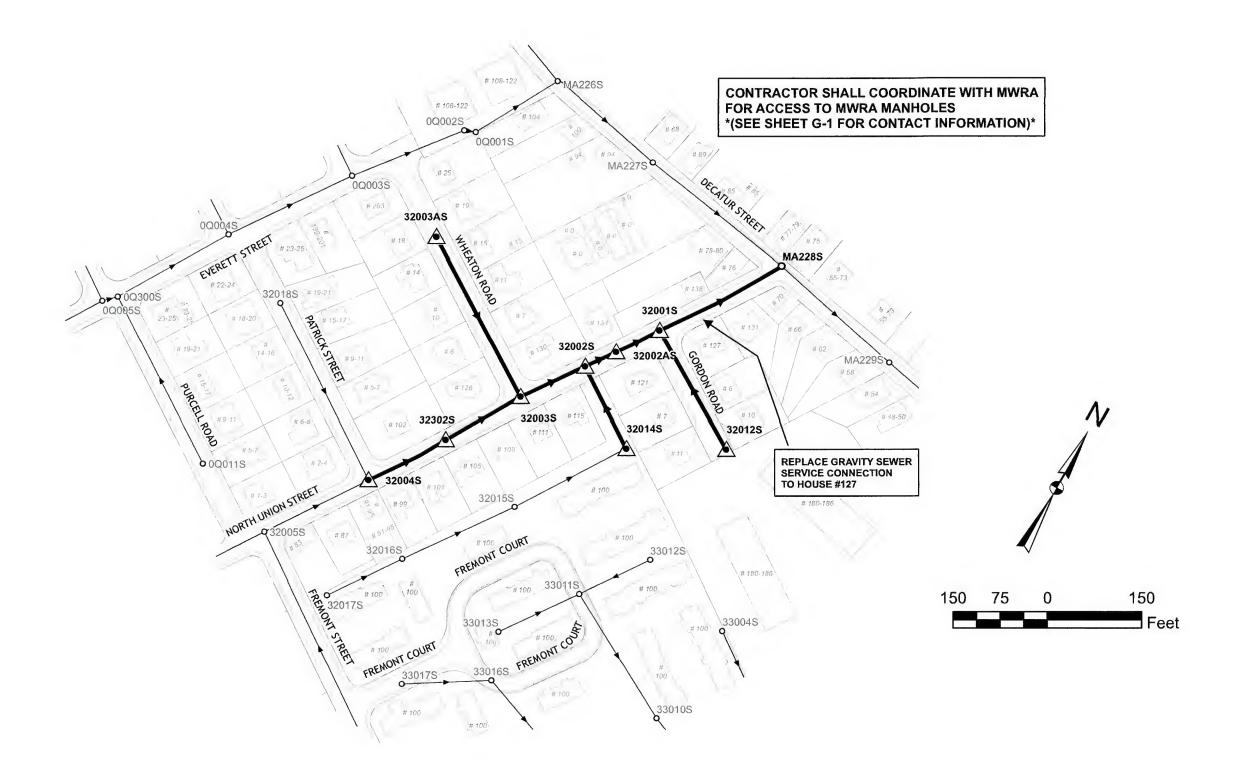
SHEET 10 OF 14





MANHOLE TO MANHOLE CURED-IN-PLACE PIPE ALTERNATE BID NO 1 ITEM 18h 18c

STREET/LOCATION	SUBAREA	MANHOLE		TO SUBAREA	TO MANHOLE		PIPE DIA (IN)	MATERIAL	APPROXIMATE MH TO MH LENGTH (LF)	REINSTATE SERVICE
HIGH HAITH ROAD	12	043		12	027		8	VC	271	0+53, 0+72, 1+07, 1+42, 1+92
GORDON ROAD	32	001		32	012		8	AC	217	1+03, 1+06, 1+60, 1+70
NORTH UNION STREET	32	001		MA	228		8	VC	224	0+79, 1+02, 1+44
NORTH UNION STREET	32	002	Α	32	001		8	VC	82	0+15, 0+21
NORTH UNION STREET	32	002		32	002	Α	8	VC	59	NONE
NORTH UNION STREET	32	002		32	014		8	VC	151	NONE
NORTH UNION STREET	32	003		32	002		8	VC	111	0+22, 0+76, 0+80
WHEATON ROAD	32	003		32	003	Α	8	VC	287	0+97, 1+05, 1+72, 1+81, 2+37, 2+44
NORTH UNION STREET	32	004		32	302		8	VC	137	0+36, 0+98, 1+00
NORTH UNION STREET	32	302		32	003		8	VC	135	0+35, 0+92, 0+99
CUTTER HILL ROAD	37	022		37	023		8	VC	113	0+94
SUMMER STREET	37	023		37	011		8	VC	24	NONE
SUMMER STREET	37	024		37	011		8	VC	41	NONE
MILL STREET	37	024		37	301		8	VC	222	1+00, 1+03, 1+64, 2+06



CEMENTITIOUS LINING OF SEWER MANHOLES

ALTERNATE BID NO. 1 ITEM 20a								
SUBAREA	MANHOLE	MATERIAL	AP					

STREET/LOCATION	SUBAREA	MANHOLE		MATERIAL	APPROXIMATE MANHOLE DEPTH (VF)
HIGHLAND AVENUE	12	025		BRICK	8
HIGHLAND AVENUE	12	026		BRICK	6
HIGHLAND AVENUE	12	027		BRICK	8
HIGHLAND AVENUE	12	028		BRICK	8
HIGHLAND AVENUE	12	029	Α	BRICK	4
HIGHLAND AVENUE	12	029		BRICK	7
HIGH HAITH ROAD	12	043		BRICK	9
NORTH UNION STREET	32	001		BRICK	8
NORTH UNION STREET	32	002	Α	BRICK	6
NORTH UNION STREET	32	002		BRICK	6
WHEATON ROAD	32	003	Α	BRICK	6
NORTH UNION STREET	32	003		BRICK	6
NORTH UNION STREET	32	004		BRICK	8
GORDON ROAD	32	012		BRICK	5
FREMONT COURT	32	014		BRICK	9
NORTH UNION STREET	32	302		BRICK	7
MILL STREET	37	011		BRICK	8
CUTTER HILL ROAD	37	022		BRICK	9
MILL STREET	37	023		BRICK	7
MILL STREET	37	024		BRICK	8
MILL STREET	37	301		BRICK	7

INSTALL MANHOLE INFLOW DISH ALTERNATE BID NO. 1 ITEM 20c

ALIERNATEB	ALTERNATE BID NO. THEN ZUC									
STREET/LOCATION	SUBAREA	MANHOLI								
HIGHLAND AVENUE	12	027								
HIGHLAND AVENUE	12	029								
CUTTER HILL ROAD	37	022								

REPLACE MANHOLE FRAME AND COVER

ALTERNATE BID NO. 1 ITEM 20d									
STREET/LOCATION	SUBAREA	MANHOLE		MATERIA					
CUTTER HILL ROAD	37	022		BRICK					

MAINLINE CHEMICAL ROOT TREATMENT

ALTERNATE BID NO. 1 ITEM 17a

		ALI	CKNAIE BID I	O. THEN I	./a			
STREET/LOCATION	SUBAREA	MANHOLE	TO	то		PIPE DIA	MATERIAL	APPROXIMATE MH
		t	SORAKEA	MANHOLE		(IN)		TO MH LENGTH (LF)
HIGH HAITH ROAD	12	043	12	027		8	VC	271
NORTH UNION STREET	32	002	32	014		8	VC	151
WHEATON ROAD	32	003	32	003	Α	8	VC	287

REPLACE GRAVITY SEWER SERVICE CONNECTION

ALTERNATE BID NO. 1 ITEM 11a, 11b

			ТО	то	PIPE DIA	EXISTING	APPROXIMATE MH	APPROXIMATE	BUILDING	APPROXIMATE
STREET/LOCATION	SUBAREA	MANHOLE	SUBAREA	MANHOLE	(IN)	MATERIAL	TO MH LENGTH (LF)	STATION	CONNECTION	DEPTH (VF)
NORTH UNION STREET	32	001	MA	228	8	VC	224	0+79	HSE #127	7.5

OPEN CUT POINT REPAIR OF GRAVITY SEWER

ALTERNATE BID NO. 1 ITEM 10a TO TO SUBAREA MANHOLE (IN) PIPE DIA (IN) APPROXIMATE MH APPROXIMATE TO APPROXIMATE REINSTATE SERVICE HIGH HAITH ROAD 12 043 12 027 8 VC 2+61 NONE

CUT PROTRUDING SEWER SERVICE CONNECTION

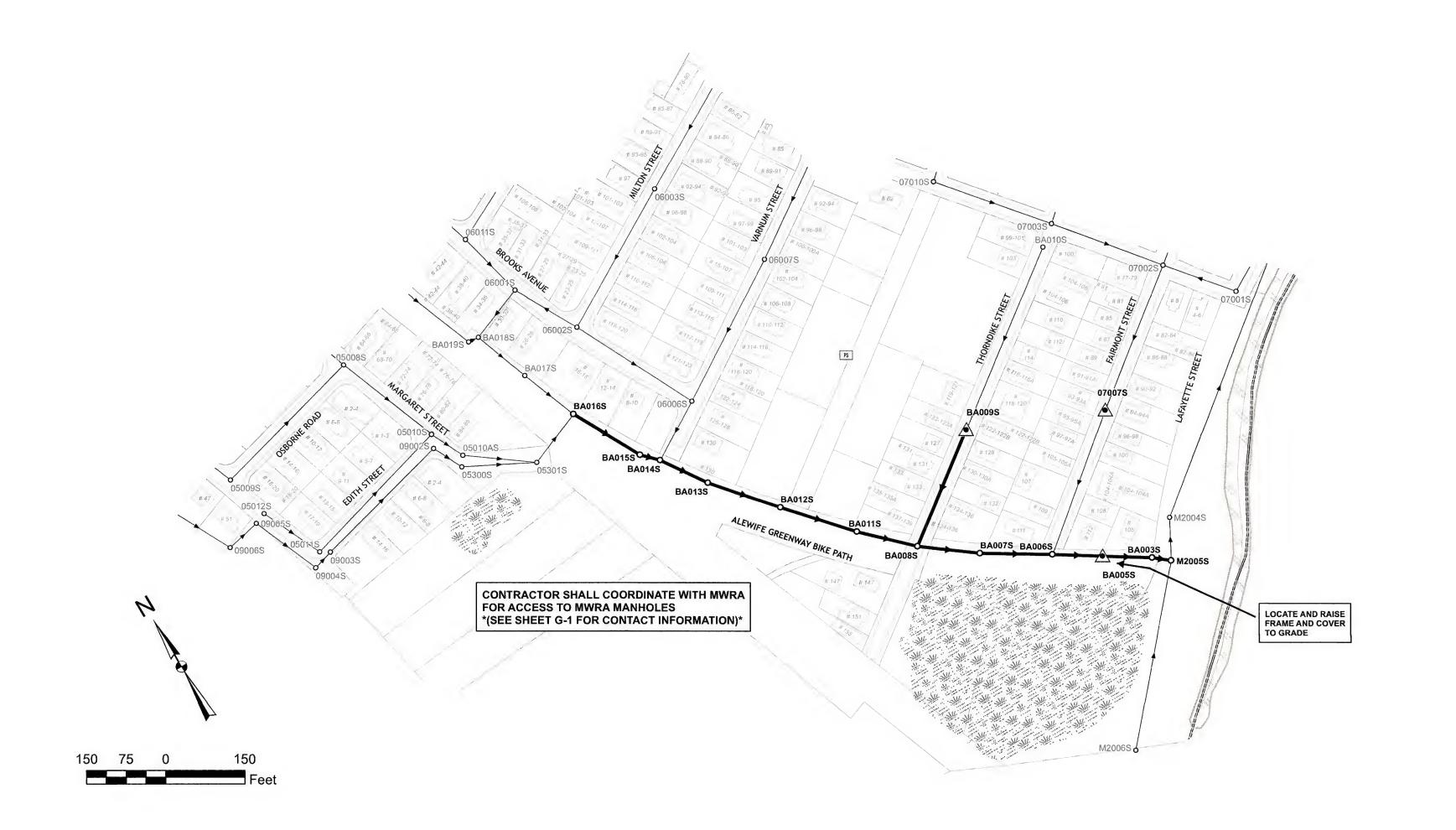
ALTERNATE BID NO. 1 ITEM 19a

STREET/LOCATION	SUBAREA	MANHOLE	TO SUBAREA	TO MANHOLE		PIPE DIA (IN)	MATERIAL	APPROXIMATE MH TO MH LENGTH (LF)	APPROXIMATE STATION
WHEATON ROAD	32	003	32	003	Α	8	VC	287	1+72
NORTH UNION STREET	32	302	32	003		8	VC	135	0+92
MILL STREET	37	024	37	301		8	VC	222	1+64
MILL STREET	37	024	37	301		8	VC	222	1+03



ALTERNATE

SHEET 11 OF 14



CEMENTITIOUS LINING OF SEWER MANHOLES

	ALTERNAT	E BID NO. 21	TE	M 26a	
STREET/LOCATION	SUBAREA	MANHOLE		MATERIAL	APPROXIMATE MANHO DEPTH (VF)
FAIRMONT STREET	07	007		BRICK	6
ALEWIFE GREENWAY BIKE PATH	BA	005		BRICK	10
THORNDIKE STREET	ВА	009		BRICK	8

RAISE MANHOLE FRAME AND COVER TO GRADE

KAISE WANHOLE FKAI	VIE AND CO	VER TO GRA	\Dt	
ALTERNATE B	ID NO. 2 ITI	M 26b		
STREET/LOCATION	SUBAREA	MANHOLE		MATERIAL
ALEWIFE GREENWAY BIKE PATH	BA	005		BRICK

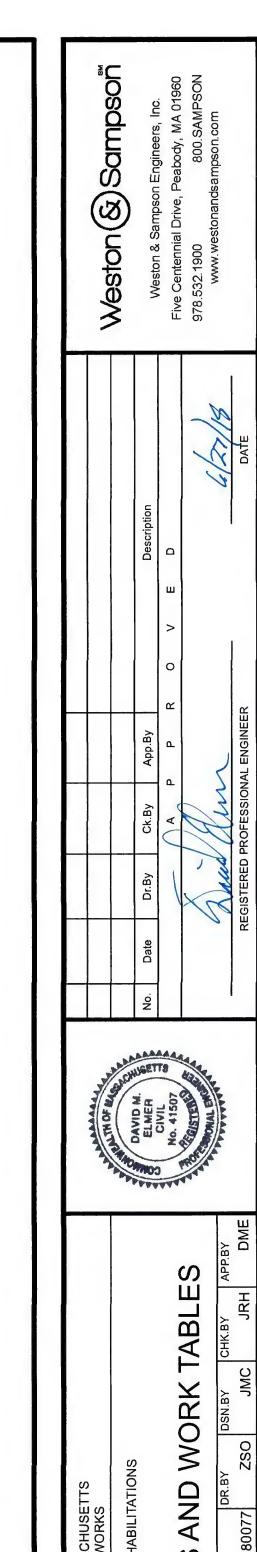
SERVICE CONNECTION REHABILITATION

ALTERNATE BID NO. 2 ITEM 25a, 25b STREET/LOCATION SUBAREA MANHOLE TO SUBAREA MANHOLE (IN) MATERIAL TO MH LENGTH (LF) THORNDIKE STREET BA 009 BA 008 8 VC 255 0+58, 0+95, 0+97, 1+56, 1+78, 2+12

MANHOLE TO MANHOLE CURED-IN-PLACE PIPE

ALTERNATE BID NO. 2 ITEM 24a, 24b

STREET/LOCATION	SUBAREA	MANHOLE	TO SUBAREA	TO MANHOLE	PIPE DIA (IN)	MATERIAL	APPROXIMATE MH TO MH LENGTH (LF)	REINSTATE SERVICE
ALEWIFE GREENWAY BIKE PATH	BA	003	M2	005	18	VC	37	NONE
ALEWIFE GREENWAY BIKE PATH	BA	005	BA	003	18	VC	100	0+50
ALEWIFE GREENWAY BIKE PATH	BA	006	BA	005	18	VC	90	NONE
ALEWIFE GREENWAY BIKE PATH	ВА	007	BA	006	18	VC	144	NONE
ALEWIFE GREENWAY BIKE PATH	ВА	800	BA	007	18	VC	87	0+02
ALEWIFE GREENWAY BIKE PATH	BA	011	BA	800	18	VC	48	NONE
ALEWIFE GREENWAY BIKE PATH	BA	012	BA	011	18	VC	146	NONE
ALEWIFE GREENWAY BIKE PATH	BA	013	BA	012	18	VC	139	NONE
ALEWIFE GREENWAY BIKE PATH	BA	014	BA	013	18	VC	104	NONE
ALEWIFE GREENWAY BIKE PATH	ВА	015	BA	014	18	VC	39	NONE
ALEWIFE GREENWAY BIKE PATH	ВА	016	BA	015	18	VC	141	NONE



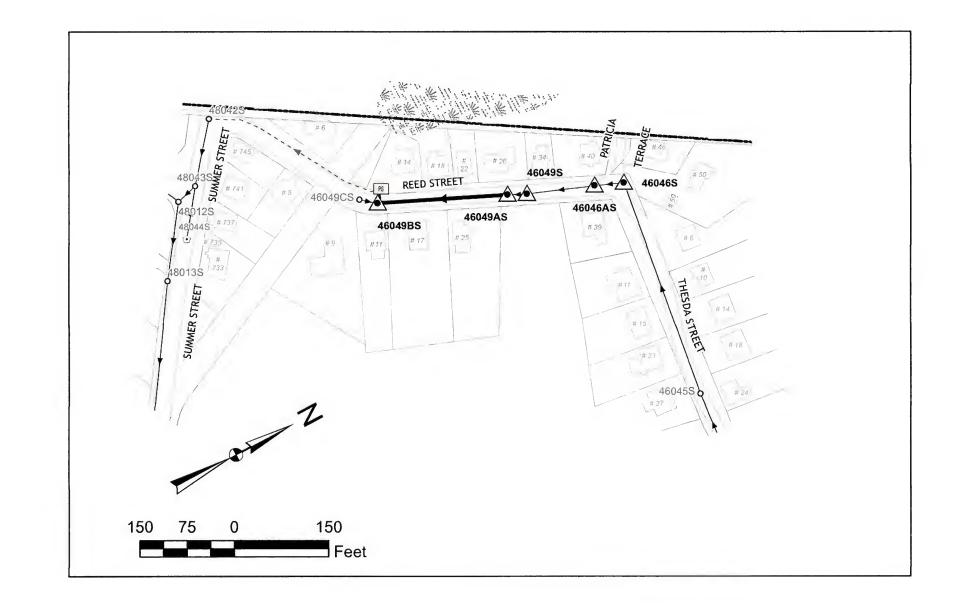
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SHEET 12 OF 14

MANHOLE TO MANHOLE CURED-IN-PLACE PIPE

ALTERNATE BID NO. 3 ITEM 30a, 30b

SUBAREA	MANHOLE	TO	ТО		MATERIAL	APPROXIMATE MH	REINSTATE SERVICE
		SORAKEA	IVIANHOLE	(114)		TO WIN LENGTH (LF)	
41	005	41	004	8	VC	277	0+05, 0+14, 0+22, 0+73, 0+78, 1+04, 1+19, 1+50, 2+27, 2+29
41	011	41	012	8	VC	75	0+12, 0+57
41	012	41	013	8	VC	171	0+42, 1+29, 1+61
41	013	41	014	8	VC	179	0+95, 1+09
41	014	41	015	8	VC	203	0+26, 0+37, 1+00, 1+12
41	015	41	019	8	VC	229	0+61, 1+06, 1+62
46	049	A 46	049 I	8	AC	207	0+35, 0+76, 1+27, 1+81, 1+99
	41 41 41 41 41 41	41 005 41 011 41 012 41 013 41 014 41 015	SUBAREA MANHOLE SUBAREA 41 005 41 41 011 41 41 012 41 41 013 41 41 014 41 41 015 41	SUBAREA MANHOLE TO SUBAREA TO MANHOLE 41 005 41 004 41 011 41 012 41 012 41 013 41 013 41 014 41 014 41 015 41 015 41 019	SUBAREA MANHOLE TO SUBAREA TO MANHOLE PIPE DIA (IN) 41 005 41 004 8 41 011 41 012 8 41 012 41 013 8 41 013 41 014 8 41 014 41 015 8 41 015 41 019 8	SUBAREA MANHOLE TO SUBAREA TO MANHOLE PIPE DIA (IN) MATERIAL (IN) 41 005 41 004 8 VC 41 011 41 012 8 VC 41 012 41 013 8 VC 41 013 41 014 8 VC 41 014 41 015 8 VC 41 015 41 019 8 VC	SUBAREA MANHOLE SUBAREA MANHOLE (IN) MATERIAL TO MH LENGTH (LF) 41 005 41 004 8 VC 277 41 011 41 012 8 VC 75 41 012 41 013 8 VC 171 41 013 41 014 8 VC 179 41 014 41 015 8 VC 203 41 015 41 019 8 VC 229

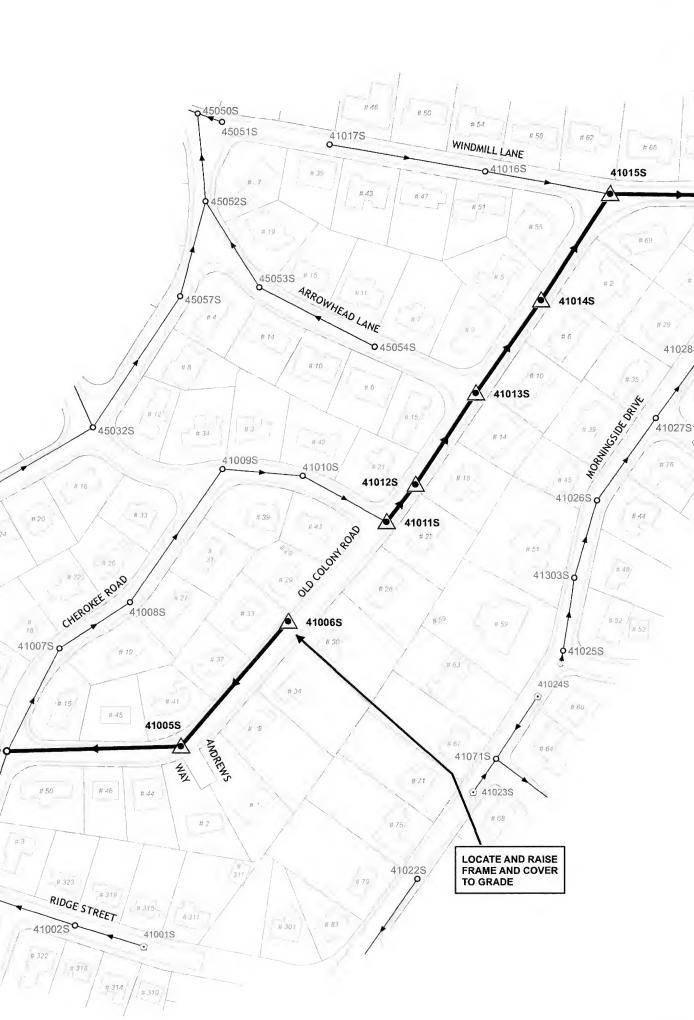




STREET/LOCATION	SUBAREA	MANHOLE		MATERIAL	APPROXIMATE MANHOLE DEPTH (VF)
REED STREET	46	046	Α	PRECAST	5
REED STREET	46	049	Α	PRECAST	12
REED STREET	46	049	В	PRECAST	12

RAISE MANHOLE FRAME AND COVER TO GRADE ALTERNATE BID NO. 3 ITEM 32c

STREET/LOCATION	SUBAREA	MANHOLE	MATERIAL
OLD COLONY ROAD	41	006	BRICK



CEMENTITIOUS LINING OF SEWER MANHOLES ALTERNATE BID NO. 3 ITEM 32a

		INIVALE DID	 	
STREET/LOCATION	SUBAREA	MANHOLE	MATERIAL	APPROXIMATE MANHOLE DEPTH (VF)
OLD COLONY ROAD	41	005	BRICK	7
OLD COLONY ROAD	41	006	BRICK	7
OLD COLONY ROAD	41	011	BRICK	6
OLD COLONY ROAD	41	012	BRICK	6
OLD COLONY ROAD	41	013	BRICK	7
OLD COLONY ROAD	41	014	BRICK	7
WINDMILL LANE	41	015	BRICK	7
WINDMILL LANE	41	019	BRICK	8
REED STREET	46	046	BRICK	6
REED STREET	46	049	BRICK	7
WINCHESTER ROAD	50	251	BRICK	9

MAINLINE CHEMICAL ROOT TREATMENT

		AL	TERNATE BID	NO. 3 ITEM	29a		
STREET/LOCATION	SUBAREA	MANHOLE	TO SUBAREA	TO MANHOLE	PIPE DIA	MATERIAL	APPROXIMATE MH TO MH LENGTH (LF)
OLD COLONY ROAD	41	005	41	006	8	VC	262

STRUCTURAL MANHOLE TO MANHOLE CURED-IN-PLACE PIPE

ALTERNATE BID NO. 3 ITEM 31a, 31b

STREET/LOCATION	SUBAREA	MANHOLE	TO SUBAREA	TO MANHOLE	PIPE DIA (IN)	MATERIAL	APPROXIMATE MH TO MH LENGTH (LF)	REINSTATE SERVICE
OLD COLONY ROAD	41	005	41	006	8	VC	262	0+28, 1+01, 1+27, 1+68, 2+17, 2+40, 2+44

 App.8y
 Description

 P R O V E D
 Five Centennial Drive, Peabody, MA 01960 978.532.1900 800.SAMPSON

c.1

SHEET 13 OF 14

CONTRACTOR SHALL COORDINATE WITH MWRA FOR ACCESS TO MWRA MANHOLES *(SEE SHEET G-1 FOR CONTACT INFORMATION)* AMOUSS A

MAINLINE CHEMICAL ROOT TREATMENT

ALTERNATE BID NO. 4 ITEM 35a

	ALIEMANIE DID 1401 TITEM 350										
STREET/LOCATION	SUBAREA	MANHOLE	TO SUBAREA	TO MANHOLE	- 1	PIPE DIA (IN)	MATERIAL	APPROXIMATE MH TO MH LENGTH (LF)			
FOX MEADOW LANE	44	030	44	025		8	VC	165			
FOX MEADOW LANE	44	031	44	030		8	VC	238			
ORCHARD PLACE	AM	001	M4	198		8	VC	242			
ORCHARD PLACE	AM	002	AM	003		8	VC	158			

CEMENTITIOUS LINING OF SEWER MANHOLES

ALTERNATE BID NO. 4 ITEM 38a

STREET/LOCATION	SUBAREA	MANHOLE	MATERIAL	APPROXIMATE MANHOLE DEPTH (VF)
FOX MEADOW LANE	44	030	BRICK	7
FOX MEADOW LANE	44	031	BRICK	6
ORCHARD PLACE	AM	001	BRICK	8
ORCHARD PLACE	AM	002	BRICK	8
ORCHARD PLACE	AM	003	BRICK	6

BUILD MANHOLE BENCH AND INVERT

ALTERNATE BID NO. 4 ITEM 38b

ALTERIVATE BID NO. 4 ITEM 380									
STREET/LOCATION	SUBAREA	MANHOLE	MATERIA						
FOX MEADOW LANE	44	031	BRICK						

CUT PROTRUDING SEWER SERVICE CONNECTION

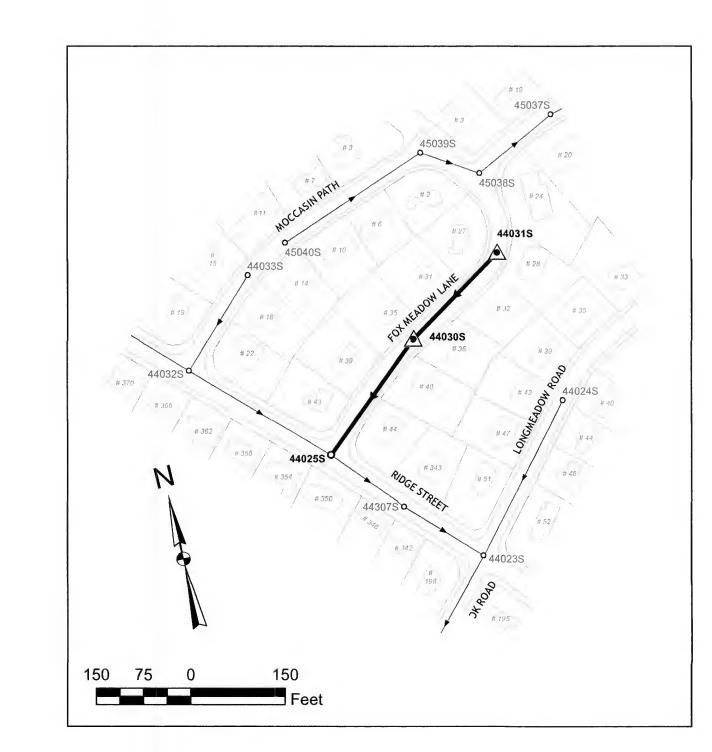
ALTERNATE BID NO. 4 ITEM 37a

STREET/LOCATION SUBAR		NAANIIOLE		ТО	ТО		PIPE DIA	MATERIAL	APPROXIMATE MH	APPROXIMATE		
SIREEI/LOCATION	SUBAREA	A MANHOLE		SUBAREA	MANHOLE		(IN)	MATERIAL	TO MH LENGTH (LF)	STATION		
ORCHARD PLACE	AM	001		M4	198		8	VC	242	1+72		

MANHOLE TO MANHOLE CURED-IN-PLACE PIPE

ALTERNATE BID NO. 4 ITEM 36a, 36b

STREET/LOCATION	SUBAREA	MANHOLE	TO SUBAREA	TO MANHOLE	PIPE DIA (IN)	MATERIAL	APPROXIMATE MH TO MH LENGTH (LF)	REINSTATE SERVICE
FOX MEADOW LANE	44	030	44	025	8	VC	165	0+04, 0+50, 1+03, 1+20
FOX MEADOW LANE	44	031	44	030	8	VC	238	0+08, 0+47, 0+85, 1+37, 1+61
ORCHARD PLACE	AM	001	AM	002	8	VC	97	0+10
ORCHARD PLACE	AM	001	M4	198	8	VC	242	0+60, 1+11
ORCHARD PLACE	AM	002	AM	003	8	VC	158	0+72



BIDS

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